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Hispanic Parents' Perceptions of Human Papillomavirus Vaccination for Male Children

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Walden University

College of Health Sciences

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Christy A. Wilson Dubuisson

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2019

Abstract

Hispanic Parents' Perceptions of Human Papillomavirus Vaccination for Male Children

by

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MSN, Regis University, 2010

BSN, Regis university, 2008

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

May 2019

Abstract

Hispanic Americans experience a disparate burden of human papillomavirus vaccination (HPV)-related cancers. Despite vaccine availability, HPV vaccine uptake amid Hispanic American adolescent males in the United States is under the national goal. Furthermore, childhood vaccination compliance is driven by the parents; yet, there is little research on parents' perceptions of HPV vaccination of male children. The purpose of this phenomenological study was to explore the attitudes, beliefs, concerns, and decision-making factors of Hispanic American parents of male children aged 11- to 13- years-old surrounding HPV vaccination. The health belief model provided the framework for the study. Face-to-face interviews were conducted with 12 participants in a rural county in Colorado in which Hispanic Americans had a higher rate of reportable sexually transmitted infections than non-Hispanics. Data analysis included descriptive coding to summarize and synthesize the interview results. The results showed Hispanic parents had a positive attitude toward HPV vaccination, and parents believed that the vaccination would protect their child. Most of the parents were aware of the HPV vaccine. The parents believed in healthcare providers and would accept the vaccine if it was recommended by them. Despite several parents having concerns about HPV vaccinations, they still claimed they would vaccinate their child. The findings from the study can be used to inform educational offerings regarding HPV vaccination for Hispanic American boys.

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Dedication

I dedicate my dissertation to my beloved wife, Regina. Thank you for being with me and supporting me through this long journey. You are my rock. I also dedicate it to my children: Misty, Allyssa, Eli, and Ben who have always been understanding when I needed to work on my schooling. I am sure they have thought I would never finish going to school. I also dedicate it to my father, Patrick Cordova Sr. Daddy, you didn't make it to see me finish but I know you knew I would. Thanks for always encouraging me to follow my dreams and to do what makes me happy. To AnnaBelle and Abbi, my pups, who rested quietly by my side for numerous hours when they would have much rather been hiking or barn hunting. I love you all dearly.

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Chapter 1: Introduction to the Study

The overall United States rate of adolescent human papillomavirus (HPV) vaccination completion is 70.4% (Centers for Disease Control and Prevention [CDC], 2013). Under or unimmunized children are at a greater risk for disease (Molano et al., 2003) such as cancers resultant from HPV infection. Hispanic American and African American men have higher rates of HPV-associated penile cancer than European American and non-Hispanic men, and Hispanic American and African American women have higher rates of HPV-associated cervical cancers than do European American and non-Hispanic women (CDC, 2016a). Simultaneously, public concern about real or supposed negative effects linked to vaccines has amplified, which affects vaccination rates (Saad et al., 2009).

It is critical to recognize the parental judgment process with respect to childhood vaccination, particularly considering societal debates regarding vaccination (Benin, Wisler-Scher, Colson, Shapiro, & Holmboe, 2006). Childhood vaccination compliance is significantly driven by the parents of the child; yet, there is little research on parents' perceptions of HPV vaccination and almost no research on the perceptions of parents of male children. Approval and recommendation for male HPV vaccination came after female approval and recommendation; thus, the majority of researchers have focused on females; currently, there are a lack of data regarding predictors of male vaccine uptake (Taylor et al., 2014). The purpose of this study was to determine the beliefs and attitudes of Hispanic American parents of male children, aged 11 to 13 years, regarding HPV

vaccination. Comprehension of parents' insight and knowledge is vital to recognize educational opportunities and needs.

Background of the Study

HPV is so widespread that almost all persons who are sexually active contract the virus at some point in their life (CDC, 2015a). Annually, more than 27,000 individuals are stricken by an HPV-caused cancer (CDC, 2015b). HPV infection is the second most significant infection connected to cancer (Colon-Lopez, Ortiz, & Palefsky, 2010). Most cervical cancers are caused by HPV; HPV is also causative for anal, penile, vaginal, vulvular, and cancers of the throat (CDC, 2015b). Most people do not realize they have an HPV infection because they never have any symptoms; however, if HPV infection is not treated, it can cause genital warts (CDC, 2016a). In some individuals, for unknown reasons, HPV causes major health effects including cancers (Molano et al., 2003).

According to the CDC (2015d), the Hispanic American population is the largest ethnic minority in the United States with approximately 1 out of 6 people in the United States identifying as Hispanic American, which is nearly 57 million people. It is estimated that this could increase to 1 out of 4 people identifying as Hispanic American by 2035 (CDC, 2015d). Scholars have identified that sociocultural background, beliefs, and experiences drive vaccine decisions (Griffioen et al., 2012; Katz et al., 2013). There are an increasing number of studies being conducted on HPV awareness and knowledge; however, the main concentration has been on females (Colon-Lopez et al., 2010). Research concentrated on Hispanic American parents is limited (Colon-Lopez et al., 2010) and even less so on Hispanic American parents of male children. One of the few

studies to survey parents regarding attitudes associated with HPV vaccination for their sons was conducted by Perkins et al. (2013). In this study, 50% of participants were European American, approximately 25% were African American, and 25% were Hispanic American parents (Perkins et al., 2013). Oldach and Katz (2012) indicated that parents of females and parents of males have dissimilar needs and react differently when formulating decisions regarding HPV vaccination of their children.

Pediatricians and family doctors are encountering increasing rates of parents who refuse to vaccinate their children, even though vaccination programs in the United States have been successful in decreasing the incidence of vaccine-preventable diseases (Olpinski, 2012). Vaccines may be refused due to public concern about real or supposed negative effects linked to vaccines (Saad et al., 2009). Additionally, fear of negative effects from vaccination has fueled the antivaccination movement (Olpinski, 2012). Vaccination of males against HPV lessens the cost of healthcare and increases quality of life (Elbasha & Dasbach, 2010). In 2009, the CDC approved the Gardasil HPV vaccination for boys as young as 9 years of age (Giuliano et al., 2011) but the rates for completing the required three doses of the vaccination remain low (CDC, 2016c). Childhood vaccination is powered by the child's parents (Taylor et al., 2014). It is critical to recognize the parental judgment process with respect to childhood vaccination, particularly considering societal debates regarding vaccination (Benin et al., 2006).

Problem Statement

Hispanic Americans experience a disparate burden of HPV-related cancers. Hispanic American men suffer nearly double the incidence of HPV-related penile cancers

than do European American men (CDC, 2016b). Despite the possibility for prevention of HPV causative cancers, HPV vaccine uptake amid Hispanic American adolescent males in the United States is under that of the national goal. The Healthy People 2020 national goal is that 80% of adolescent males complete the three-vaccine series (Office of Disease Prevention and Health Promotion, 2017). The overall United States rate of adolescent HPV vaccination completion is 70.4% (CDC, 2013). In 2015, only 35% of Hispanic American adolescent males had received all three doses of the vaccine, while overall 28% of adolescent males had completed the three-vaccine series (CDC, 2016c). Hispanic American completion rates may possibly be attributed to Hispanic Americans' positive cultural attitudes surrounding children and the delivery of immunization information that is provided to minority mothers who use government-subsidized healthcare programs (Kim, Frimpong, Rivers, & Kronenfeld, 2007). Despite rates of completion for Hispanic American adolescents being higher than that of adolescent males overall, completion rates for Hispanic American adolescents are still far from meeting the Healthy People 2020 goal. There is a need to address this issue as HPV infection can lead to a multitude of cancers, including penile, and Hispanic American males have higher rates of penile cancers than do non-Hispanic males (CDC, 2016e). Less HPV infection would create healthier communities of color (CDC, 2016e).

Purpose of the Study

The purpose of this qualitative, phenomenological study was to explore and describe the beliefs and attitudes of Hispanic American parents of male children, aged 11 to 13 years, regarding HPV vaccination. I attempted to group beliefs and attitudes

thematically. The findings from this study contribute to and increase knowledge regarding HPV vaccination for Hispanic American boys.

Research Questions

This study was guided by three research questions.

RQ 1: What are the attitudes and beliefs of Hispanic American parents of male children, 11-to 13-years-old, regarding HPV vaccination for their male children?

RQ 2: What are the HPV vaccination concerns of Hispanic American parents of male children aged 11 to 13 years?

RQ 3: What factors contribute to the decision-making process for Hispanic American parents of male children age 11-13 years to vaccinate or decline HPV vaccination for their male children?

Theoretical Foundation

The theoretical framework for this study was the health belief model (HBM). Although founded in psychological theory, the HBM is exercised most frequently in public health (Redding, Rossi, Rossi, Velicer, & Prochaska, 2000). The model was first created by the Public Health Service in the 1950s; it was developed to clarify why people did not participate in programs to detect and prevent disease, particularly tuberculosis (Glanz, Rimer, & Viswanath, 2015). Constructs of the HBM include perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self- efficacy (Glanz et al., 2015). This study was strengthened by using the HBM to develop interview questions surrounding parental perceptions of HPV vaccination for their male children.

Nature of the Study

This was a qualitative, phenomenological study. This methodology was best suited to explore and describe the beliefs and attitudes of Hispanic American parents of male children, aged 11 to 13 years, regarding HPV vaccination. Finlay's (2009) instructions for qualitative research were applied to understand an individual's experiences. This design was used to concentrate on illustrating in detail participants' shared experience of a concept, phenomenon, or event.

Prior to conducting interviews, approval from the institutional review board (IRB) was given (Office for Human Research Protections, 2016). When approval from the IRB was granted, I proceeded with having all participants read the informed consent form; I then answered any questions the participants had and had each one sign the informed consent form. The informed consent form was provided to the participants with the central purpose of the study to advise them of participant confidentiality and to address potential risks, as well as provide any anticipated benefits of the research.

In qualitative research, there are no set rules for sample size (Patton, 2002). Sample size is dependent upon the study's purpose, what will be useful, and what can be done with available time and resources (Patton, 2002). Based on commitment to the individual, allowing for their autonomy, and recognizing their uniqueness, Reid, Flowers, and Larkin (2005) reported that 10 participants is at the high end of most recommendations for sample size. Reid et al. (2005) emphasized that a smaller number of participants studied in greater intensity is superior to a larger number of participants studied at a more superficial level. In studies employing qualitative interviews, it may be

more advantageous to consider the contribution of new knowledge rather than the number of participants (Malterud, Siersma, & Guassora, 2016). One such approach is the cumulative approach, where the researcher adds participants to the sample until such time as enough data are obtained and where no further benefit would be obtained from adding to the participant number (Denscombe, 2014).

According to Malterud et al. (2016), there must be an opening estimate of sample size throughout the process. The sample size should be ascertained by research design, purpose, questions, and available resources (Creswell, 2013; Denscombe, 2014). Five to 25 participants can accomplish a productive phenomenon description (Creswell, 2013; Denzin & Lincoln, 2011). According to Marshall and Rossman (2015), researchers of most current phenomenological health studies lean toward including one to four informants. Guest, Bunce, and Johnson (2006) concluded that if the researcher's objective is to explain a shared perception, belief, or behavior amid a comparatively homogeneous group, then a sample size of 12 participants is expected to be enough. Homogeneous sampling was employed in this study. Although sample size could not be predicted, it was anticipated that the number of initial participants to explore and describe the beliefs and attitudes of Hispanic American parents of male children, aged 11 to 13 years, regarding HPV vaccination would be 12. I acknowledged that if theoretical saturation was not met, additional participants may have been needed to be included in the study.

The study was conducted in Weld County, Colorado. The population of Weld County is 294,932 with 29.1% claiming Hispanic origin (United States Census, 2016). Of

the 9,611 males aged 10 to 14-years-old, 3,638 are of Hispanic origin (Suburban Stats, 2016). HPV infection is not a reportable disease, so the incident rate in Weld County is unknown. However, the rate of reportable sexually transmitted disease including chlamydia, gonorrhea, and syphilis in Weld County is higher in the Hispanic American population than in the non-Hispanic population (Colorado Department of Public Health and Environment, 2018).

Interviews with participants were recorded and then transcribed. Codes were assigned to data. Words or phrases that appeared similar were grouped into the same category. Descriptive analysis was employed to identify patterns of recurrent themes. Participants' quotes were used to illustrate themes that were being described.

Definitions

Anogenital: Concerning the anal and genital areas (Venes & Taber, 2005).

Genitals: Organs of generation; reproductive organs (Venes & Taber, 2005).

Human papillomavirus (HPV): A papillomavirus that is specific to humans and is a common viral sexually transmitted disease in the United States. Several HPV types (especially HPV 16, 18, 31, and 45) have been shown to contribute to squamous cell cancers of the anogenital region, including cancers of the anus, cervix, penis, and vulva. Other Types 6 and 11 are responsible for genital warts (Venes & Taber, 2005).

Vaccination: Injection of a killed or weakened infectious organism in order to prevent the disease (CDC, 2016d).

Virus: A tiny organism that multiplies within cells and causes disease; viruses are not affected by antibiotics, the drugs used to kill bacteria (CDC, 2016d).

Assumptions

The assumption prior to beginning fieldwork was that parents want healthy children and desire to protect their children from disease. The extent to which parents accept the HPV vaccination for their male children may be related to their knowledge, beliefs, and attitudes surrounding HPV and HPV vaccination. It was also assumed that the participants would be truthful and open in their responses.

Scope and Delimitations

Scope

There is a gap in the literature regarding parental perceptions of HPV vaccination for male children. I conducted a study in Weld County, Colorado to explore and describe the beliefs and attitudes of Hispanic American parents of male children, aged 11 to 13 years, regarding HPV vaccination. Parents who did not self-identify as Hispanic American or parents who had children, but the children were not males within the age range of 11-13 years were excluded. Caregivers other than the child's natural or adoptive parents were also excluded. The Healthy People 2020 goal is to increase completion of the three-dose HPV vaccine series for males by age 13-15 years (Office of Disease Prevention and Health Promotion, 2016). Because the goal is to complete vaccination series by 13-15 years of age, I chose a younger age population to focus on starting with 11-year-olds, as this is the youngest age the USFDA (United States Food and Drug Administration, 2006) had initially approved to receive the HPV vaccine (US Department of Health and Human Services, 2016).

Delimitations

The delimitations of a study are the characteristics limiting the scope of inquiry. These are established by decisions made during the proposal development (Creswell, 2013; Marshall & Rossman, 2015). The participants were recruited from one county in the Western United States. Additionally, the participants who were represented in this study were from one ethnic group, Hispanic Americans. The employment of interviews, rather than surveys, limited the number of participants' views that were collected for interpretation.

Limitations

The small sample size that is typical of qualitative studies limits generalizations. This study was limited to Hispanic American parents of male children, aged 11- to 13-years, residing in Weld County, Colorado. The results may not be generalizable to a larger population or to Hispanic American parents in other areas. Additionally, the study was limited to Hispanic American parents who speak English, as the interviews were only conducted in English. The results are not generalizable to Hispanic American parents who only speak Spanish.

Significance of the Study

Medical providers and educators may find this study to be significant for a variety of reasons. The study adds to the current knowledge on parental perceptions of HPV vaccination. It may also impart insight into Hispanic American parents' knowledge, belief, and attitudes surrounding HPV and HPV vaccination. Factors that promote and/or create barriers to HPV vaccination for males were not identified. The data I collected provided information to understand Hispanic American parents' perceptions and attitudes

toward HPV vaccination for their male children. Social change implications include the potential to expand awareness through education that will possibly increase the low rates of HPV vaccine series completion of adolescent Hispanic American males. Delivering preventative services to diverse populations and acquiring and employing knowledge of health-related beliefs and attitudes has the potential to strengthen programs and increase community participation, thereby closing gaps in health status amid diverse populations (American Cancer Society, 2012).

There is a need for future studies on attitudes and beliefs related to HPV vaccine acceptability among various ethnic groups (Perkins et al., 2013). Additionally, there is a need to focus on adolescent males; assessing attitudes of parents about HPV vaccine in young males will be critical to develop successful implementation of widespread HPV vaccination amid this group (Podolsky, Cremer, Atrio, Hochman, & Arslan, 2009). In this study, I assessed elements impacting Hispanic American parents' parental judgments on HPV vaccination for male children. The findings from the study will contribute to and increase knowledge that can be used to inform educational offerings regarding HPV vaccination for Hispanic American boys.

Summary

The Hispanic American population is currently the largest ethnic group in the United States, and their numbers are estimated to increase (CDC, 2015d). Hispanic American men and women suffer a disproportionately higher rate of some cancers related to HPV infection than do European American men and women (CDC, 2016a). Vaccination of males against HPV lessens the cost of healthcare and increases quality of

life (Elbasha & Dasbach, 2010). HPV vaccine uptake amid Hispanic American adolescents in the United States is under that of the national goal of 80% of adolescent males to complete the three vaccine series (Office of Disease Prevention and Health Promotion, 2016), with only 35% of Hispanic American adolescent males having received all three doses of the vaccine (CDC, 2016c).

Scholars have identified that sociocultural background, beliefs, and experiences drive vaccine decisions (Griffioen et al., 2012; Katz et al., 2013). There are a growing number of studies focused on HPV awareness and knowledge; however, the main concentration has been on females (Colon-Lopez et al., 2010). Research concentrated on Hispanic American parents is limited (Colon-Lopez et al., 2010) with few studies focused on Hispanic American parents of male children. In this qualitative study, I employed the HBM to guide the development of interview questions. Comprehension of the parents' insight and knowledge is essential to recognize fundamental educational opportunities and needs that can inform educational offerings regarding HPV vaccination for Hispanic American boys.

In Chapter 1, I presented an overview of the study and insight into the methodology and theoretical basis employed to accomplish the research. In Chapter 2, I will present a review of current literature that supports the need for this research.

Chapter 2: Literature Review

Introduction

The purpose of this study was to describe Hispanic American parents' perceptions on HPV vaccination for their male children. Vaccination programs have proven to be successful in limiting vaccine-preventable disease in the United States. HPV vaccination was introduced into the routine immunization schedule in the United States in 2006 (Markowitz et al., 2013). Approximately 14 million people are newly infected with HPV each year; most men and women will contract at least one type of HPV at some point in their lives (CDC, 2017b). However, uptake of the HPV vaccination remains low (Brueggman et al., 2016; Ribassin-Majed, Lounes, & Clemencon, 2012; Tsui et al., 2013). To be effective, three doses of the vaccine are required over a period of 6 months; to enhance vaccine completion, comprehension of the vaccine series and time frame for completion are important (Markowitz et al., 2013). Vaccination compliance for children is driven by the child's parents. Therefore, it is critical to recognize the judgment process of the parents when considering childhood vaccination (Benin et al., 2006).). Parental vaccination decision-making is multifaceted involving cognitive, psychosocial, and political factors and which is also influenced by cultural environments (McNeil,,,,et al, 2019). Comprehension of parents' perceptions regarding HPV vaccine is essential to nurture vaccination acceptance.

In this chapter, I present immunization background information, a review of research about the subject of the study, the beliefs and attitudes of parents regarding HPV vaccination, and a review of research employing the HBM. Due to the limited number of

studies published on Hispanic American parents of male children, I draw on literature about parents of female and male children regardless of their ethnic background.

Review of Related Research

This review of literature was compiled employing keyword searches in Academic Search Premier, Medline, CINAHL, Thoreau Multi-Database Search, ProQuest, and Walden University Dissertations. The following key words were used to assist in identification of potential resources: *HPV + vaccine, parental perceptions + HPV vaccination, perspectives + human papillomavirus, parents perceptions + HPV vaccination, adolescent acceptance + HPV vaccination, Hispanic parents + male vaccination, Latina parents + human papillomavirus, Hispanic parents + HPV vaccination, childhood vaccination + success, HPV vaccine + adolescent males, health belief model + HPV vaccination, health belief model + vaccination*. Identification of pertinent resources assisted in identifying other relevant resources, which I used to develop the literature review. I endeavored to keep the review current, so I concentrated on comprising literature that had been published within the past 5 years. I encompassed research published more than 5 years ago when I established it was significant to include formative work. Formative documents included were used to portray the HBM, which has been employed in health behavior research for over 60 years. I also cited information from certain textbooks used during my doctoral program studies, some of which were published more than 5 years ago. Publication dates of my literature review research ranged from 1925 to 2019; however, the majority were published in 2012 or later.

Literature Review

The literature review includes articles on childhood vaccination history, HPV infection and HPV vaccine history, HPV vaccine safety, and acceptance of HPV vaccination by adolescents. Additionally, I review literature focused on parental perceptions of childhood vaccination and of HPV vaccination for female and male children. Further literature on Hispanic American parents' perceptions of vaccination is reviewed.

Vaccine History

One of the greatest public health achievements that occurred in the 1900s was vaccination programs (CDC, 1999a). Vaccines are one of the most effective public health interventions in the prevention of morbidity, mortality, and public health costs related to infectious disease (Olpinski, 2012). During the beginning of the 20th century, few effective treatment and preventive measures were available to prevent infectious disease; infectious diseases were prevalent in the United States and took a toll on the population (CDC, 1999b). The first vaccine in the United States was introduced in 1809 in Massachusetts; it was for protection against smallpox (Olpinski, 2012). In 1949, the last documented case of smallpox in the United States occurred (Meadows, 2003). The last naturally occurring case of smallpox in the world was in Somalia in 1977 (Meadows, 2003). In 1980, the World Health Organization (WHO) declared smallpox eradicated (Meadows, 2003).

In 1905, in the case of *Jacobson v. Massachusetts*, the United States Supreme Court sanctioned states' rights to pass and enforce required vaccination laws (Opinski,

2012). The contemporary age of immunization laws in the United States started in the 1960s–1970s and was linked to the problems in controlling measles outbreaks (Omar, Salmon, Orenstein, deHart, & Halsey, 2009). By 1969, 17 states had enacted laws to require the measles vaccine before a child could enter school, and 12 states required six routine vaccinations (Omar et al., 2009). It was not until the early 1980s that all 50 states had enacted laws requiring vaccinations for school entry (Omar et al., 2009). Currently, all states allow for medical exemptions for mandatory vaccinations (Stadlin, Bednarczyk, & Omer, 2012). All states, excluding Mississippi and West Virginia, allow for exemptions for religious beliefs for mandatory vaccinations (Yang & Debold, 2014).

Despite vaccines being one of the most effective public health interventions for prevention of infectious disease (Olpinski, 2012), an increasing number of parents perceive vaccination as unsafe and unnecessary (Dube, Vivion, & MacDonald, 2015). In 1982 a program aired on WRC-TV in Washington D.C. that claimed diphtheria, tetanus, pertussis (DTP) vaccine, principally the pertussis component, as causing seizures, severe brain damage, and delayed motor and mental development (Olpinski, 2012). Reacting to this program, numerous parents in the United States and around the world rejected vaccines for their children (Olpinski, 2012).

However, vaccines have proven to decrease the burden of disease. Before the availability of vaccination, diphtheria was a common cause of illness and death amid children. In the 1920s, diphtheria vaccines were introduced and by the 1940s it was a universal childhood immunization. Because of vaccinations, diphtheria is now rare in the United States (CDC, 2016g). Since 1947, tetanus cases have decreased by more than

95%; this decline, at least in part, is because of the tetanus vaccine that was introduced in the 1930s (CDC, 2017c). Children are routinely vaccinated and there are booster vaccinations for adults (CDC, 2017d). Pertussis and whooping cough vaccines are also effective (CDC, 2016f). Most children, 98 out of 100, who complete the DTaP series will be fully protected, and of those who do get pertussis, it is a much milder case (CDC, 2016g).

Wakefield (1998) suggested a correlation between the measles, mumps, and rubella (MMR) vaccine and autism. In 2010, the British General Council issued the results of its years' long investigation into Wakefield's research. It was concluded that Wakefield acted unethically and with disregard for his patients (Olpinski, 2012). The study by Wakefield was formally retracted by the Lancet (Editors of the Lancet, 2010). In epidemiological studies, scholar have shown no relationship between vaccine exposure and autism; yet, some parents continue to refuse or delay vaccination of their children (National Institute of Health, 2013). The antivaccination movement using the Internet and other media sources continues to drive fear of vaccines (Olpinski, 2010). The movement toward vaccine rejection has been associated with decreased rates of vaccine acceptance and increased rates in vaccine preventable disease (Dube et al., 2015).

MMR vaccine protects against three diseases: measles, mumps, and rubella and is safe and effective (CDC, 2016h). Before the vaccination program that was started in 1963, 3 to 4 million people in the United States got measles each year (CDC, 2016h). The introduction of the vaccine led to more than a 99% decrease in measles cases in the United States. (CDC, 2016h). Prior to the United States mumps vaccination program in

the 1960s, mumps was a widespread childhood disease. Since the vaccination programs, there has been a 99% decrease in mumps cases in the United States (CDC, 2016i). Before vaccine availability, rubella was also a common disease affecting young children. The last epidemic in the United States occurred in the mid-1960s (CDC, 2016j). Due to successful vaccination programs, since 2004, rubella has been eliminated in the United States (CDC, 2016j).

Although resistance to vaccinate remains, vaccines are an effective public health intervention for the prevention of morbidity and mortality related to infectious disease (Olpinski, 2012). The World Health Assembly started the polio eradication effort in 1988 that aimed to eliminate polio (WHO, 2017). The effort focused on stopping transmission by providing vaccinations. Since the beginning of this effort, the effects of polio which can include nerve damage that can lead to paralysis and even death, have decreased by more than 99% (WHO, 2017). Wild poliovirus cases have decreased from 350,000 cases in 1988 to 33 cases reported in 2018 (WHO, 2019). Although polio has not totally been eradicated, it is a feasible target if immunization rates are kept high all over the world (Kimman & Boot, 2006).

Additionally, haemophilus influenza type b (Hib) vaccinations have been given since the early 1990s and are regarded as an effective public health intervention. In 2006, the WHO (2013) recommended Hib vaccination be included in childhood immunization programs as this vaccination has a potential to prevent pneumonia and meningitis that are caused by this infection. The Hib vaccine has been proven to be effective and safe in the reduction of Hib disease burden (Pilishvili et al., 2013; Ramsay, McVernon, Andrews,

Heath, & Slack, 2003). The utilization of this vaccine has led to the decrease of greater than 90% of Hib disease in countries that employ the vaccine in their national immunization programs (WHO, 2013).

HPV Infection

In the United States, sexually transmitted infections (STIs) are common, and a disproportionate burden of these are experienced by adolescents and young adults (Satterwhite et al., 2013). HPV is the most common STI worldwide and in the United States; most males and females who are sexually active will acquire the infection at some point in their life (Satterwhite et al., 2013). HPV is transmitted during vaginal, anal, or oral sex although it is most commonly spread during vaginal or anal sex. HPV can be transmitted from an infected individual to another individual even when the infected person shows no signs or symptoms (CDC, 2017b).

Most HPV infections are harmless and can clear the body extemporaneously; however, infections with high risk HPV types, including Types 16 and 18, can lead to cancers of the cervix, vulva, vagina, anus, penis, and oropharynx (Crosbie, Einstein, Franceschi, & Kitchener, 2013). Public health exertions need to focus on prevention in at-risk populations to decrease the rate of and impact of STIs (Satterwhite et al., 2013). In the 20th century, vaccinations were proven to be a public health success in the United States (Olpinski, 2012). The causal link between HPV and cancer led to a worldwide effort for the development of an effectual vaccine (Crosbie et al., 2013).

HPV Vaccination for Males

Gardasil was the first HPV vaccine to be licensed by the FDA in 2006 (FDA, 2006). Initially, the vaccine was aimed at the prevention of cervical cancer; abnormal precancerous cervical, vaginal, and vulvar lesions; and genital warts and, therefore, was approved only for use in females (FDA, 2006). It was not until 2009 that Gardasil was approved for prevention of genital warts in males between the ages of 9 to 26 years (CDC, 2010; FDA, 2009). However, it was not regularly recommended nor generally covered by insurance until 2011 (CDC, 2011). The vaccine is beneficial to males and may have indirect health benefits for the males' female sexual partner as it helps protect the female partners against HPV-related cervical cancer (CDC, 2011; Elbasha & Dasbach, 2010). Males additionally stand to benefit directly from the vaccine due to genital warts, anal, and oropharyngeal cancer prevention (CDC, 2011). Gardasil 9, approved by the FDA in 2014, is approved for both males and females for the prevention of a variety of cancer diseases caused by HPV (Jorge & Wright, 2016).

HPV Vaccine Safety

The HPV vaccine is an effective and safe measure for preventing HPV (CDC, 2017d; Macartney et al., 2013; Toft, Tolstrup, & Storgaard, 2014). However, there can be side effects associated with the vaccine (CDC, 2017d). Most people have no side effects from the vaccine; for those who do have side effects, they are commonly mild (CDC, 2017d). The most common event linked to HPV vaccines is local inflammation that includes redness, pain, and swelling at the injection site (Brotherton & Gertig, 2011). Additionally, fever, headache, malaise, nausea, and joint pain are reported as common

side effects (CDC, 2017c). Reactions are generally mild and self-limiting (Macartney, et al., 2013). Despite the possible side effects, both Cervarix and Gardasil are well tolerated (Einstein, Baron, & Levin, 2013).

Acceptance of HPV Vaccination by Adolescents

The overall United States rate of adolescent HPV vaccination completion is 70.4% (CDC, 2013). The Healthy People 2020 national goal is that 80% of adolescent males complete the three-vaccine series (Office of Disease Prevention and Health Promotion, 2017). Despite this goal, the initiation and completion rate for adolescent male HPV vaccination is inadequate (Tsui et al., 2013). In 2012, fewer than 7% of adolescent males had received three doses of the vaccine (Office of Disease Prevention and Health Promotion, 2017). The Healthy People 2020 goal for adolescent females to complete the three-vaccine series is also 80% (CDC, 2017b). However, in 2012, only 28% of adolescent females had received three vaccine doses (Office of Disease Prevention and Health Promotion, 2017).

Kepka, Ding, Hawkins, Warner, and Boucher (2016) reported that fewer than 7% of adolescent males had completed the three-dose series for HPV vaccination in 2012. Hispanic American males and any adolescent male who was current on other vaccinations were more likely to have completed the HPV vaccine series (Kepka et al., 2016).

Miller, Wickliffe Jahnke, Linebarger, and Humiston (2014) found that adolescents lacked knowledge about the HPV vaccination and that the knowledge deficit was slightly greater among the male adolescents. Only 40% of the participants had received one or

more doses of the HPV vaccine (Miller et al., 2014). Mothers, fathers, and grandmothers were listed as being influential to the adolescents' attitude, either negatively or positively, toward the vaccine (Miller et al., 2014).

Ayissi et al. (2012) found that greater than 80% of participants were aware of HPV and cervical cancer. More than 75% of the participants had knowledge of prevention of HPV. Additionally, Ayissi et al. found that participants were knowledgeable about the HPV vaccine and had interest in receiving it.

Blumenthal et al. (2012) assessed the comprehension and acceptance of HPV vaccine in adolescents and concluded that adolescents who obtained the vaccine were more likely to be female and to have knowledge of pap testing and cervical cancer. Many of the adolescents stated they would seek advice from parents or physicians before deciding whether to accept the vaccine (Blumenthal et al., 2012). Additionally, Katz et al. (2013) concluded that vaccine uptake was driven by a sociocultural backdrop of endemic HIV, poverty, sexual violence, and a high rate of female headed households. These studies focused on the adolescents' acceptance of the vaccine.

Wilson, Brown, Carmody, and Forgarty (2016) conducted a study to determine HPV vaccination completion amid low-income adolescents in urban areas. Wilson et al. (2016) reviewed electronic health record data on HPV vaccination for adolescents who had received at least one dose of the HPV vaccine. The researchers found that only 28.4% of the adolescents completed the series. Completion rates were higher for non-English speaking female and Hispanic adolescents and insured African American adolescents.

Cooper et al. (2014) conducted interviews with adolescent boys and their parents about their knowledge and attitudes surrounding HPV vaccination for males. The researchers concluded that the boys had a low knowledge and comprehension regarding HPV and HPV related diseases; the boys also had a fear of needles and felt pressure from other students regarding vaccination. The researchers found these results similar to those conducted with girls. Cooper et al. (2014) indicated that both genders feared needles and had a desire to know more about HPV and the vaccine. Adolescent girls also have a low knowledge and comprehension about HPV and the vaccination (Wong, Alias, Sam, & Zimet, 2019). Hughes, Jones, Feemster, and Fiks (2011) found that adolescents felt they were not an active part of the decision-making process, even when clinicians and parents reported including them in the process.

Parental Perceptions

Childhood vaccination compliance is driven by the parents of the child. It is critical to recognize the parental judgment process with respect to childhood vaccination (Benin et al., 2006). There are increasing numbers of parents who refuse vaccines for their children (Olpinski, 2012). From 1980-1998 vaccine coverage for the recommended series was greater than 95% each year (CDC, 1999b) but in the past 17 years, the percentage of vaccination completion for children has dropped more than 20%. Data for 2015 indicated that 72% of pre-school children in the United States had completed all 7 recommended vaccination series which included: DTP, polio, MMR, Hib, Hepatitis B, varicella, and pneumococcal (CDC, 2017e). Adolescent vaccination rates remain lower than the 95% rates seen in earlier years: 81% for meningococcal, 83% for varicella, 86% for Tdap, 91%

for Hepatitis B, and 90% for MMR, respectively (CDC, 2017e). HPV vaccination rates for adolescents remain extremely low with only 41% of females having received three doses of the vaccine and a mere 28% of males having received all three doses (CDC, 2017e).

Scholars have shown that parents want more information regarding childhood vaccinations than what they are getting (Ames, Glenton, & Lewin, 2017; Eby, 2017; Wideman et al., 2016). Ames et al. reviewed 38 studies exploring perceptions surrounding childhood vaccines. These researchers found that lack of information led to parents being concerned about safety of side effects and efficacy of the vaccine. Parents also wanted a variety of vaccine information including benefits and risks of vaccines before the scheduled vaccination appointment. Vaccine decision-making was sometimes impacted by poor communication or negative relationships with health care workers. Additionally, parents were not sure what information about vaccines could be trusted. Eby (2017) found similar results although the parents surveyed trusted their healthcare providers' information, the parents still had concerns about vaccine side effects and safety. Despite these concerns childhood vaccination rates remain relatively high with polio, MMR, hepatitis B, and varicella being greater than 90% and DPT, Hib and pneumococcal being greater than 80% (CDC, 2017e). However, completion rates for HPV vaccination remain at 70.4% (CDC, 2013). Provider recommendation for the HPV vaccine occurring at the same time and in the same way as other adolescent vaccines, is a targeted behavior that can increase parental acceptance of the vaccine (Garbutt et al., 2018).

Public education and listening to parents' concerns surrounding vaccination are important for vaccine programs to continue to prevent disease (Olpinski, 2012). Yet, there

is little research on parents' perceptions of HPV vaccination and almost nothing on the perceptions of parents of male children. Similarly, there is little research on Hispanic parents' perceptions surrounding HPV vaccination.

Widman et al. (2016) endeavored to identify barriers and opportunities related to adolescent HPV vaccination. The researchers conducted interviews with clinicians and parents. The researchers found that solutions indicated by clinicians to increase rates of HPV vaccination include public health education, removing stigma associated with vaccines, media endorsements, and targeting parents as the focus of education. Parents conveyed the need for more information about HPV disease, HPV vaccine, vaccine safety, sexual concerns, and disputing misinformation on social media.

Olshen, Woods, Austine, Luskin, and Bauchner (2005) conducted semi-structured focus groups and individual interviews with parents of adolescents. Knowledge about HPV varied, some parents were unfamiliar with HPV and some parents had a good understanding regarding HPV and the available vaccine. The parents were all concerned regarding the HPV vaccine. Parents valued their pediatrician's advice about the vaccine. Some parents had concerns that the vaccine would lead to unsafe sexual practices. Parents were also concerned about the young age at which the vaccine is given. Despite the concerns, Olshen et al. (2005) concluded that the vaccine was generally well accepted by the parents.

Allen et al. (2010) used online surveys to assess parents' knowledge, attitudes and intentions regarding HPV vaccination. The researcher found that most of the parents who were aware of the vaccine had already chosen to vaccinate their child or planned to do so.

Less than one-fourth had decided not to have their child vaccinated. Allen et al. (2010) concluded that despite some parents having limited knowledge most of the parents decided to have their child vaccinated.

Liddon et al. (2005) conducted a telephone survey of parents and guardians in to describe acceptance of a hypothetical vaccine against genital herpes along with beliefs regarding appropriate timing of vaccination. The study researchers used a hypothetical vaccine as there is no Food and Drug Administration (2016) approved drugs/vaccines for the prevention of genital herpes although there are clinical trials in process for a vaccine (Bernstein et al., 2017). In the study by Liddon et al., nearly 70% of the participants said they would choose to vaccinate their children. Almost one-third felt the vaccination should be given between the ages of 11- and 13- years-old. Liddon et al. (2005) concluded a large portion of parents would accept the vaccination. Additionally, the researchers used results to indicate that many parents believe the vaccination should be given after an age when many adolescents had already had sexual activity.

Ogunbajo, Hansen, North, Okoloko, and Niccolai (2016) interviewed parents and care givers of adolescents aged 10- to 18-years-old to assess their perceptions of HPV vaccination compared to other adolescent vaccinations. Ogunbajo (2016) found that many perceived the HPV vaccine to be like other routine vaccinations including the ability of the vaccine to prevent disease, the method of administration and belief in the health care providers' recommendation. Also, some parents noted the benefit of HPV vaccine in preventing cancer which the parents felt was a serious disease. However, some parents noted the mode of transmission for HPV was being sexual and this raised mixed opinions.

Some parents were unsure if the vaccine should be given at such a young age citing the possibility of the adolescents thinking sexual activity would have less risks because the adolescents had been vaccinated. Overall, most had positive views of the vaccine.

Paul et al. (2014) used semi-structured questionnaires to assess parents' knowledge of and attitudes toward HPV vaccination for their children. Paul et al. (2014) found that most parents had a low level of knowledge related to HPV and the vaccine. A common concern among the parents was side effects of the vaccine. However, most parents were willing to vaccinate their children especially if a health care worker recommended it.

Oldach and Katz (2012) aimed to establish HPV vaccine availability and to evaluate patient and parental attitudes, perceived barriers, and decisional differences regarding vaccination for female and male adolescents. Findings suggested that parents of females and parents of males had dissimilar information needs and therefore may react to different messages when formulating informed decisions regarding HPV vaccination of their children. One main difference is that parents of male children were not aware the vaccine was available to and recommended for boys and not understanding why boys would need the vaccine. Parents of female children were fearful that giving the vaccine would increase sexual activity. However, overall parents of female children were more receptive toward HPV vaccine. The following literature characterizes parental perceptions of HPV vaccination for their children.

Perceptions Surrounding HPV Vaccination for Female Children

Adolescent girls are more likely than boys to be vaccinated against HPV (Lindley et al., 2016). Additionally, parents of girls are more likely than parents of boys to report a health care provider recommended the vaccination (Lindley et al., 2016).

Griffioen et al. (2012) investigated factors influencing mothers' decision process in vaccination of daughters against HPV, and daughters' and mothers' perspectives regarding HPV vaccination. Griffioen et al. (2012) found that there were several factors that influenced mothers' acceptance of HPV vaccination for their daughters; these included mothers' beliefs and experiences; interactions with clinicians, friends, and family members; and exposure to media reports/marketing. Generally, daughters reported that the choice of vaccination was a joint decision, whilst most mothers held the choice was theirs. Siu (2014) found that mothers of daughters in Hong Kong did not have positive perceptions of HPV vaccine and believed it was not needed.

In contrast to the results by Siu (2014), Ogilvie et al. (2007) found that more than 70% of parents intended to have their daughters vaccinated against HPV. Their results indicated that parents who had positive thoughts regarding the vaccine were influenced by subjective norms, felt the vaccine had limited influence on sexual behavior, and thought someone they knew was likely to get cervical cancer.

Chiang et al. (2015) conducted semi-structured interviews to explore parental opinions of disease, prevention methods, vaccines in general, and the HPV vaccine particularly. Chiang et al. (2015) found that parental knowledge regarding HPV and the vaccine were low, yet the majority had their eligible daughters vaccinated. The parents saw themselves as accountable for their children's health and the vaccine as a tool for indirect control. Additionally, the parents had trust in the health care providers and were aware of the dangers in today's world related to sexual behaviors. Gottvall et al. (2013) found similar results when they interviewed parents of girls. Three main themes in their results were information regarding HPV and HPV vaccination, parental responsibility to protect their daughters, and trust of the recommendation from health care providers.

In contrast, Voidazan, Tarcea, Morariu, Grigore, and Dobreanu (2016) found that parents had an average knowledge regarding HPV infection and vaccination. Yet, the participants had low rates of vaccination despite their knowledge. Voidazan et al. (2016) concluded that the participants vaccination refusal was derived from fear of side effects and because little or unclear information was provided to the parents.

Degarege et. al (2019) found that parents of adolescent girls with positive perceptions related to HPV vaccination were more likely to vaccinate their child whereas, those with negative perceptions were less likely to vaccinate. Parents who received information from sources they trusted tended to focus on the benefits of the vaccine and had positive perceptions. Parents with negative perceptions tended to be concerned with

side effects, high cost, lacked family support for the vaccine, or did not feel they had enough information about the vaccine.

Parents' concerns about HPV vaccine are like concerns about other vaccines (Staras, Vadaparampil, Patel, & Shenkman, 2014). Although Stara et al. found that most parents felt that the HPV vaccine was safe and could prevent cervical cancer, parents who reported not getting a recommendation from their provider for the vaccine tended to disagree about the safety and efficacy of the vaccine. Therefore, those parents were less likely to initiate the vaccine for their daughters.

Perceptions Surrounding HPV Vaccination for Male Children

Adolescent boys are less likely than girls to be vaccinated against HPV (Lindley et al., 2016). Little is known about parental perceptions regarding HPV vaccination for male children as few studies have been done. Some studies have shown parental concern regarding HPV vaccination for their male children. Perkins et al. (2013) found that 75% of parents would vaccinate their sons due to worries of exposure and consequences of the infection; however, the lack of information pertaining specifically to males posed barriers. While Reiter et al. (2013) did not focus on parental perceptions, the researchers examined HPV vaccine acceptance with male adolescents while also recognizing vaccination predictors. Reiter et al. (2013) found that fathers and non-Hispanic, Caucasian parents were less likely to vaccinate male children than were their Hispanic counterparts and mothers. The reasons Reiter et al. (2013) found for parents not vaccinating their male children included that the parents did not know vaccine was available to boys; concerns that the vaccine was not safe; the vaccine is too new;

physician did not recommend; sons were too young for the vaccine; and sons had not had a recent physician visit. Perez et al. (2015) also found that parents were not aware the vaccine was available for boys, had concerns about risks associated with vaccine, and wanted a doctor's recommendation for the vaccine. Lindley et al. (2016) found that parents of sons were less likely than parents of daughters to report a health care provider recommendation of the vaccine.

Schuler, DeSousa, and Coyne-Beasley (2014) found that parental decisions to vaccinate sons against HPV were most likely motivated by providing protection to their sons' future female partners. Their findings are supportive of those by Reiter et al. (2010) which indicated an association between interest in vaccinating sons and protecting sons' future female partners. Polonijo, Carpiano, Reiter, and Brewer (2016) likewise found that Hispanic parents reported higher pro-social vaccination attitudes. Pro-social attitudes arrive from a sense of responsibility for other individuals and believing in what would socially be expected/accepted. However, Polonijo et al. (2016) found that only some of the attitudes were correlated to a willingness to vaccinate.

Alexander et al. (2012) sought to investigate the decision-making process of parents and sons when determining to get the HPV vaccine or not. Alexander et al. (2012) found, as did Perez et al. (2015), that protection from disease was a primary reason to vaccinate. Additionally, Alexander et al. (2012) found some information regarding the vaccine had been misinterpreted as some parents and their sons thought the HPV vaccine would protect against other STIs such as gonorrhea, herpes, and HIV.

Although most of the parents and sons knew the vaccine protected against genital warts, they did not recall it protected against some cancers.

Radisic, Chapman, Ingrid, and Wilson (2017) found that parents' decisions to vaccinate their sons against HPV were mostly made upon perceived benefits of the vaccine, perceived risk of their son acquiring HPV infection, and recommendations by health care providers. Additionally, Radisic et al. (2017) found that concerns regarding side effects and indecision regarding effectiveness along with cost and lack of provider recommendation led to barriers for vaccination. Radisic et al. (2017) also found additional factors affecting the decision-making process to include knowledge regarding HPV infection and vaccine and parent child discussions. Likewise, Vogel, Appel, and Winker (2018) found that most parents' decision to vaccinate was based on wanting to protect their child from disease and the vaccine had been recommended by their healthcare provider. Vogel et al. (2018) also found that parents who declined the vaccine for their sons reported that they did not know enough about the vaccine.

Gattengo, Vertamatti, Bednarczyk and Evan (2019) found that most parents supported the vaccine for males. Support of the HPV vaccine was highest when the parents felt the vaccine was financially accessible. Parents who had high levels of knowledge and positive attitudes regarding HPV vaccination tended to be more supportive of vaccination for both males and females. This suggests information accessibility is a key component in decision-making.

Additionally, Shuler and Coyne-Beasley (2016) found that parents' beliefs related to social norms of HPV vaccination played a role in their intention to vaccinate or not.

Over half the parents disagreed that other parents were vaccinating their sons. Alexander et al. (2012) concluded that both parents and their sons have a role in the decision-making process regarding HPV vaccination and their decision is influenced by a multitude of factors.

Hispanics/Latinos

While little is known about parental perceptions regarding HPV vaccination for male children, even less is available on Hispanic parents' perceptions. Low levels of knowledge and understanding regarding HPV and the HPV vaccine have been recognized within the Hispanic population (Fernandez et al., 2009; Vanslyke et al., 2008). There is a need for the Hispanic population to have basic information about HPV infection and vaccination; there is also a need to incorporate information that addresses barriers specific to this population (Maertens, Jimenez-Zambrano, Albright, & Dempsey, 2017). To accomplish this task, it is important to understand Hispanic parents' perceptions surrounding HPV vaccination.

Warner et al. (2014) conducted a study in Utah to survey Latino parents' perceptions of HPV and willingness to have their sons and daughters vaccinated. Warner et al. (2014) found that parents reported having little knowledge about the HPV vaccine, high cost of the vaccine, and lack of provider recommendation created barriers to vaccine acceptance. The concern over cost was related to inadequate or lack of insurance coverage. One mother even stated that she could not pay \$100 for one shot and another stated the cost was why her daughter had not completed the vaccine series. Likewise, Allen et al. (2012) found a variety of ethnically diverse parents, including Latinos, voiced

that they had insufficient information to make informed decisions regarding the vaccine as well as lack of provider recommendation. Additionally, Luque, Raychowdhury, and Weaver (2012) held focus groups with Hispanic immigrant parents in Georgia and found most Hispanic parents were not aware a vaccine existed for HPV; the parents also did not know about the Vaccines For Children (VFC) program that could provide the vaccinations.

Kepka, Ulrich, and Coronado (2012) found that Hispanic mothers believed that the HPV vaccine was important to protect their daughters from cervical cancer. However, two thirds of the mothers thought getting the vaccine might make their daughters more likely to become sexually active and one third felt their adolescent daughters were too young to receive the vaccine. Albright et al. (2017) found that some Spanish speaking parents in Colorado did not initiate the vaccine because they felt it would make their child become sexually active. Additionally, Kornfeld, Byrne, Vanderpool, Shin, and Kobetz (2013) assessed immigrant Hispanic men's awareness and knowledge of HPV and related risk factors along with attitudes regarding HPV vaccination. Their findings indicated that most of the participants were willing to vaccinate their children, both boys and girls. However, their knowledge of HPV was low and their understanding of risk factors varied among the group.

Current trends suggest that minority adolescents begin HPV vaccination at greater rates than do their European American counterparts. However, the minority adolescents have lower completion rates for the series (Jeudin, 2014). Warner et al. (2015) found that Hispanic parents felt that they needed more information about the vaccine; the parents

also had concerns regarding side effects, cost, and insurance coverage. Additionally, the parents reported there was not a strong recommendation for the vaccine from their health care provider (Warner et al., 2015). Likewise, Albright et al. (2017) found that Spanish speaking parents reported that healthcare providers had not encouraged the vaccine and/or did not explain the need to complete the series of three immunizations.

Rickert et al. (2014) did not focus on parental perceptions but conducted a study to evaluate potential predictors of parental intent to vaccinate. Rickert et al. (2014) found health beliefs of Hispanic parents included higher perceived risk for HPV infection than non-Hispanic parents yet Hispanic parents had less belief in the benefits of immunization than non-Hispanic parents. When evaluating social norms relative to HPV vaccination for male children, Shuler and Coyne- Beasley (2016) found that Hispanic parents preferred not to answer regarding what other Hispanic parents thought about HPV vaccination. Reimer, Schommer, Houlihan, and Gerrard (2013) studied the differences in HPV awareness and knowledge between men and women and European Americans and Hispanic Americans. Reimer et al. (2013) found that European Americans and women were more likely to have HPV knowledge and higher levels of HPV knowledge than were Hispanic Americans or men. Most Latina parents who had reservations about or rejected HPV vaccination for their daughters expressed a need for more information, were worried about safety of the vaccine or did not know where to get the vaccination (Yeganeh, 2010). Hispanics were more likely to start the HPV vaccination but less likely to complete the three-dose series compared to non-Hispanics (Barboza & Dominguez, 2016).

Few researchers have examined HPV vaccination in male adolescents and fewer yet perceptions of parents of Hispanic origin regarding the vaccine for their male children. Overall, previous studies with Hispanic parents regarding perceptions surrounding HPV vaccination for their male children have not been given enough scholarly attention.

Theoretical Foundation

I employed the HBM in this study to assess elements impacting Hispanic parents' perceptions of HPV vaccination for their male children. The HBM was appropriate for this study because it emphasizes how and why people adopt or reject health behaviors. This model has been used extensively in research to explain the change and/or maintenance of health-related behaviors (Glanz et al., 2015). I employed the HBM to develop the interview guide and to assist with data analysis.

Health Belief Model Background

Although there are several theories related to behavior and behavior change, one of the well-researched and widely used theories of health-related behaviors is the health belief model. The HBM has been employed for over 60 years as a guiding conceptual foundation in health behavior research (Glanz, et al., 2015). The theory was developed in the 1950s and originated from classical stimulus response theory (Watson, 1952) and cognitive theory (Lewin, 1951; Rosenstock, Stretcher & Becker, 1988). Although grounded in psychological theory, the HBM is exercised most frequently in public health (Redding et al., 2000). The HBM emerged from the research of several social psychologists who sought to explain why some individuals declined participation in

preventive health care programs such as immunization and tuberculosis screening that could aid with early diagnosis and prevention of disease (Jantz & Becker, 1984). The model as first created by the Public Health Service was developed to clarify why people did not participate in programs to detect and prevent disease, specifically tuberculosis (Glanz et al., 2015). It has been used for many purposes including serving to assist in explaining modification of health behavior and maintenance of health-related behaviors (Glanz et al., 2015). The HBM represents an important theory of behavior change. It has been discovered to be valuable in exploring retrospective attitudes and in foreseeing future health behaviors (Brewer et al, 2007).

Constructs of the HBM include: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self- efficacy (Rosenstock et al., 1988; Glanz et al., 2015). This study was strengthened by using the HBM to develop interview questions surrounding parental perceptions of HPV vaccination for their male children. Interview questions were developed using constructs from the HBM which suggests that parents' decision to have their child vaccinated against HPV is based on perceptions related to the child's susceptibility to HPV, the severity of the disease, and the risk and benefits of the HPV vaccination.

According to the HBM, the probability that a person will act to prevent illness is dependent on individuals' perceptions that they are vulnerable to the condition as well as the severity of the consequences of the condition (Glanz et al., 2015; Rosentock et al., 1998). It would also depend on the how the individual felt the precautionary behavior would effectively prevent the condition (Glanz et al., 2015). Additionally, the benefits of

reducing the threat of the condition would need to surpass the cost of acting (Glanz et al., 2015).

Perceived susceptibility means the likelihood that a person thinks there is personal vulnerability to develop the condition (Glanz et al., 2015; Rosenstock et al., 1988). This has been found to be a predictor of health protective behaviors. People are more likely to change health behaviors when they perceive a condition to be serious and are less likely to engage in healthy behaviors if they believe the condition is not serious (Harrison et al, 1992). The probability of people engaging in precautionary behaviors, such as vaccination, is contingent on how much they judge their vulnerability to or risk of the condition (Glanz et al., 2015; Redding et al., 2000)

Perceived severity means how serious the person deems the consequences of developing the condition are (Rosenstock et al.1988; Glanz, et al., 2015). People are more likely to act to prevent a condition if they believe the negative physical, psychological and/or social outcomes resulting from developing the condition present serious consequences to them. The combination of perceived susceptibility and perceived severity is the perceived threat (Glanz et al., 2015; Redding et al., 2000).

Perceived benefits concern the advantages of participating in the behavior. Motivation for action to modify a behavior necessitates the belief that the behavior will avert the condition (Glanz et al., 2015; Redding et al., 2000). If the person does not believe that HPV vaccination will prevent infection with HPV then the person would see no need to get the vaccination.

Perceived barriers are the obstacles or costs that inhibit the health behavior change (Glanz et al., 2015; Rosenstock et al., 1988). Belief by itself is not enough to provoke a person to act. To take action, the person assesses cost of the behavior compared to the benefits to be expected from the behavior. The benefit must offset the cost (Glanz et al., 2015; Redding et al., 2000). An example of this is concern regarding vaccine safety outweighing concerns about contracting polio in a person's rejection of the polio vaccine (Becker & Maiman, 1975).

Cues to action or stimulus are what inspire a person to engage in health behavior change (Glanz et al., 2015; Janz & Becker, 1984; Rosenstock et al., 1988). The incentive or disincentive that prompts or prevents the action can be either internal or external. Internal motivation may occur when someone experiences symptoms of a condition whereas external motivation can be from events or information from others such as close family and friends, the media, and care providers (Glanz et al., 2015; Janz & Becker, 1984). Other HBM constructs may also interact with cues to action. For instance, when the perception of susceptibility or severity are high, a lesser stimulus may prompt behavior action but when perceived susceptibility or severity are low, more extreme stimuli may be required to prompt the behavior action (Glanz et al., 2015; Redding et al., 2000).

Self-efficacy is a person's beliefs regarding personal capabilities to perform and to influence events affecting the person's life (Glanz et al., 2015; Rosenstock et al., 1988). Self-efficacy beliefs establish how a person feels, thinks, motivates self, and behaves. The person's value of health is sometimes included with self-efficacy. Persons

concerned about being healthy are generally more apt to participate in behaviors that are known to positively affect health (Glanz et al., 2015; Redding et al., 2000).

Health Belief Model and Vaccination

A literature review of research surrounding parental perceptions of HPV vaccination that employed the HBM as a framework was conducted. To enhance the review an additional literature review of research surrounding parental perceptions of vaccination, not specifying HPV vaccination, that employed the HBM as a framework was carried out.

Perkins et al. (2013) effectively used qualitative questions based on the constructs of the HBM to characterize the attitudes of low-income and minority parents towards vaccinating their male children against HPV. The HBM constructs that were employed included: perceived severity, perceived susceptibility, perceived benefits and perceived barriers. Results indicated that most of the parents had concerns regarding their sons' possible exposure to HPV infection and thought the consequences of infection with HPV could be severe. Additionally, the lack of efficacy and safety information available that pertained specifically to males posed barriers.

Ziemer and Hoffman (2012) examined attitudes of college aged women toward HPV vaccine. Ziemer et al. (2012) effectively employed the HBM to predict vaccine intentions and to compare unvaccinated and vaccinated women's self-efficacy, social environment and perceptions of the vaccine to predict vaccine behaviors and intentions. Their results suggested that women who viewed the HPV vaccine as more effective and beneficial in protecting them against HPV and the subsequent consequences had higher

intentions of getting vaccinated. However, many of the unvaccinated participants voiced they did not need the vaccine either because they were not sexually active or did not perceive themselves to be at risk for HPV.

Lau et al. (2013) employed the HBM to identify possible determining factors for influenza vaccination of children aged 6- to 23- months-old. In their study Lau et al. (2013) examined parental perceptions regarding influenza and the influenza vaccine for their child. Their evaluation was assisted by the HBM. It was established on some of the HBM construct which included: perceived susceptibility of influenza, those believing their child was likely to get influenza, and perceived severity of influenza. Additionally, those who chose to vaccinate were concerned about complications, hospitalization, and death. Perceived benefits of influenza vaccine were also included; if it was believed that the vaccine would prevent influenza and/or decrease severity of the disease, complications, and/or hospitalization; the parents were more likely to choose to vaccinate. Those who had more perceived barriers to influenza vaccine would be less likely to vaccinate. Of those who were vaccinated, the parents had heard about the vaccine and believed it could reduce the risk of influenza induced complications, hospitalization and death. Most of the participants believed the vaccine had side effects and this was a cause for concern and was associated with a lower likelihood for the parent to choose to vaccinate.

Cheung, Wang, Mascola, Amin, and Panaraj (2015) endeavored to examine parental attitudes for influenza vaccination of school aged children through a school located mass vaccination program. Cheung et al. (2015) effectively developed survey

questions employing constructs from the HBM. Cheung et al. (2015) found that participants who were concerned about the severity of influenza and appreciated the benefit of vaccination were more likely to get the vaccine compared to those who were unconcerned. Like Lau et al. (2013), it was proposed that parents' decision to have their child vaccinated against influenza is based on perceptions regarding the children's susceptibility to influenza, the severity of the disease, and the risks and benefits of influenza vaccination.

Wu, Lau, Ma, and Lau (2015) effectively used constructs of the HBM to survey the perceptions of Chinese parents of 24-59-month-old children on influenza and influenza vaccine. Like Lau et al. (2013), Wu et al. (2015) examined perceived susceptibility of influenza, perceived severity of influenza, perceived benefits of influenza vaccine, perceived barrier to influenza vaccine. Wu et al. found that family members' experience with influenza, their perceived susceptibility to influenza, along with the perceived benefits of or barriers to the vaccine were associated with the prevalence of vaccine acceptance.

Chen et al. (2011) conducted a cross sectional study employing the health belief model to evaluate elements that influence caregivers' decision to have their children vaccinated against influenza. Participants were parents of children between the ages of 6 and 36 months. Questionnaires were given that addressed demographics, influenza vaccination history and health beliefs. Findings emphasized the need for strategies and education program development to increase vaccination compliance and when doing so to consider caregiver age, employment status, residence, and influenza history of the

child. The health belief model helped reveal other predictors including perceived susceptibility to influenza, perceived benefits of vaccination, perceived barriers to vaccination, and cues to action.

Allison et al. (2010) conducted a cross-sectional survey of parents of elementary school-aged children to identify parental beliefs and barriers related to influenza immunization. The use of the HBM assisted in their identifying beliefs surrounding the vaccine benefit and cost, susceptibility to disease and cues to action. Factors associated with receipt of the vaccine included belief in the benefit of the vaccine, the belief of the child's susceptibility to disease, and that the vaccine was safe. Additionally, Allen et al. found if the cost barrier was removed, over 75% of the participating parents would vaccinate their child if the vaccine were free.

Murele et al. (2014) conducted interviews to explore acceptors and non-acceptors of childhood vaccinations. Murele et al. (2014) employed an interview that assessed vaccine acceptance, social and personality factors and health belief model constructs associated with the polio vaccine. The researchers found that the HBM framework was appropriate for identifying and differentiating the vaccine acceptors and non-acceptors. Murele et al. (2014) found that benefits and susceptibility were influential for polio vaccine acceptance and that family members' opinions about the vaccine mediated the relationship amid social ties and vaccine acceptance. Additionally, polio vaccine acceptance was related to outbreaks of any sort of paralysis. If there was higher incidence of paralysis, regardless of cause, polio vaccine acceptance was higher.

Summary

In this chapter, I reviewed the scholarly literature that identified the need for continued research to survey Hispanic parents' perceptions and attitudes surrounding HPV vaccination for their male children. Little is known surrounding parental perceptions regarding HPV vaccination and male children, even less on Hispanic parents' perceptions. Low levels of knowledge and comprehension of HPV and the HPV vaccine have been recognized in the Hispanic population (Fernandez et al., 2009; Vanslyke et al., 2008). However, there is little research focused on the perceptions of parents of male children and even less on Hispanic parents. To address this gap in the literature, my study focused on Hispanic parents' perceptions.

Researchers have found that the HBM is useful when conducting studies regarding vaccination (Cheung et al., 2015; Lau et al., 2013; Perkins et al., 2013; Rickert, 2014). The HBM theoretical framework was used to steer this study providing the groundwork to comprehend the parents' decision-making process regarding the vaccine for their male children. The HBM guided the development of the interview questions and assisted in the analysis of the data.

In this chapter, I presented information about immunizations, HPV infection and the HPV vaccine. The HBM and its use in previous studies regarding vaccination decisions was also reviewed. In chapter 3, I will present the research design, role of the researcher and methodology.

Chapter 3: Methodology

Introduction

In Chapter 2, I focused on the current literature on perceptions surrounding HPV vaccination for male children and demonstrated the need for continued research to determine the beliefs and attitudes of Hispanic American parents of male children, aged 11 to 13 years, regarding HPV vaccination. Comprehension of parents' insight and knowledge is vital to recognize educational opportunities and needs. In this chapter, I provide a description of the research design and rationale for its use, the participant recruitment (including inclusion and exclusion criteria), overview of the instrument used, measures taken to protect study participants, the data collection process, data analysis, and ethical considerations.

Research Design and Rationale

A descriptive, qualitative, phenomenology research design was used to explore and describe the beliefs and attitudes of Hispanic American parents of male children, aged 11- to 13- years-old, regarding HPV vaccination. Phenomenology was founded in early 20th century philosophy, and it encompasses the use of rich descriptive interviews and in-depth analysis of lived experiences to comprehend meaning creation through perception (Finlay, 2009; Reid et al., 2005; Starks & Trinidad, 2007). These types of studies are used to comprehend or depict individuals' common meaning of their experiences of a concept or phenomenon (Finlay, 2009; Reid et al., 2005; Starks & Trinidad, 2007). Additionally, phenomenology enhances comprehension of experiences by concentrating on perceptions of beliefs that might be assumed to be known as

common knowledge (Finlay, 2009; Reid et al., 2005; Starks & Trinidad, 2007). The focus of phenomenology is in examining the lived experiences or essence of several participants (Creswell, 2013). Using this type of research, I endeavored to understand individuals' meaning of experienced concepts; additionally, I was descriptive and searched for the essences of the beliefs and attitudes of Hispanic American parents of male children, aged 11 to 13 years regarding HPV vaccination. I used this design to concentrate on illustrating in detail what participants shared.

Other methods of qualitative research would not have been as useful to this study as phenomenology. I endeavored to describe the essence of the beliefs and attitudes of Hispanic American parents of male children, aged 11 to 13 years, regarding HPV vaccination. Ethnography research comes mainly from the anthropology field. The emphasis is on studying an entire culture to describe and interpret a cultural behavior (Creswell, 2013). A case study approach is used to develop an in-depth analysis of a single case or multiple cases (Creswell, 2013). Grounded theory is geared toward theory construction to explain the phenomena (Creswell, 2013). In this study, I employed phenomenology to acquire human experience insights on Hispanic American parents' beliefs and attitudes surrounding HPV vaccination for their male children. Unlike the other methods, phenomenology focuses on the individuals' own perceptions (Moustakas, 1994).

Husserl started phenomenology as a philosophical movement (Matua & Van Der Wal, 2015). Husserl asserted that the essence of phenomenology starts with the idea of epoche, bracketing (as cited in Moustakas, 1994). This denotes that there is a freedom

from suppositions that permits the researcher to reject biases, prejudices, and preconceived beliefs related to the world so that the actual meanings of the things themselves can be determined (Moustakas, 1994). Bracketing allows disconnection from conventional opinion and mitigates potential detrimental effects of misjudged preconceptions related to the research (Starks & Trinidad, 2007).

There are two key approaches to phenomenology: interpretive or hermeneutic and descriptive or transcendental (Creswell, 2013). Descriptive phenomenology is used to search for general meaning (Finlay, 2009). In this approach, the focus is on the descriptions of the participants and less so on their interpretation of the experience (Creswell, 2013). Researchers employing the descriptive form remain close to the richness of the data while refraining from making assertions (Finlay, 2009). An interpretive approach allows emphasis on the interpretive process by looking for sociologic or psychological factors influencing the response (Moustakas, 1994). This method incorporates detailed examinations of personal experiences and relates to the individuals' perceptions whilst the researcher, at the same time, has an active role in the process (Finlay, 2009; Reid et al., 2005). The researcher not only tries to comprehend the participants' point of view, but the researcher interprets the results to distinguish if there is more at hand than what the participants are comprehending (Finlay, 2009). Both approaches, while different, allocate the same philosophical foundations of constructivism and humanism (Moustakas, 1994).

In this study, I applied descriptive phenomenology to obtain a description of meaning from the participants' perspectives. According to Husserl, this approach

highlights subjectivity and detection of essences of experiences and presents a systematic and disciplined method for obtaining knowledge(as cited in Moustakas, 1994). I employed a descriptive phenomenological approach by conducting interviews with Hispanic American parents who had one or male children within the ages of 11-to 13-years-old. To maintain fidelity of the research, I focused on the descriptive properties of the participants' experiences, exhibiting their point of view of their experiences, putting aside my own experiences, and investigating a new perspective concerning the phenomenon.

Research Questions

I employed interviews to explore and describe the beliefs and attitudes of Hispanic American parents of male children, aged 11 to 13 years, regarding HPV vaccination. The intent of the research questions was to explore factors enfolding the issue and to impart the various perspectives the participants hold. The study was guided by the research questions with a focus on the data collection and analysis to answer the questions:

RQ 1: What are the attitudes and beliefs of Hispanic American parents of male children, 11-to 13-years-old, regarding HPV vaccination for their male children?

RQ 2: What are the HPV vaccination concerns of Hispanic American parents of male children aged 11 to 13 years?

RQ 3: What factors contribute to the decision-making process for Hispanic American parents of male children, ages 11-13 years, to vaccinate or decline HPV vaccination for their male children?

Role of the Researcher

Researcher as Instrument

A qualitative researcher is a key data collection instrument (Creswell, 2013). As the interviewer, I needed to identify methods to create and maintain positive rapport with the participants prior to the interviews. It was important to define for the participants my role and relationship to the study. My role as researcher was to gather, organize, and analyze the perceptions of the participants. It was also important to identify strengths and weaknesses of interview techniques. Interviewing techniques include active listening, observation of participants, and multilevel interpretation (Borbasi, Jackson, & Wilkes, 2005). Active listening required my full attention to the participant during the interview. I observed the participants' body language during the interviews and made notations of these.

Weakness in interview techniques can occur when the interviewer uses leading questions or has preconceived thoughts regarding what is and is not valued in participants' responses. Open-ended questioning in interviews provides strength by eliciting in-depth responses. Having a rapport with participants assists in the participants feeling comfortable so they are more likely to talk freely, openly, and honestly (Mack, Woodson, MacQueen, Guest, & Namey, 2005). I withheld my perspectives on the research topic, which strengthened the research by emphasizing the participants' perspective.

Researcher Participant Relationship

When employing phenomenology for a study, it is important for the researcher and participants to develop a relationship that allows for and encourages participants to share their experiences openly. Rubin and Rubin (2005) indicate that researchers must present themselves in a nonthreatening manner. During the interviews, I remained neutral and nonjudgmental as the data were being collected; I showed sensitivity, respect, and awareness as outlined in Creswell (2013) and Patton (2002). Participants were not led on how to answer the questions.

Additionally, participants were not pressured to answer any question. The relationship I had with the participants in this study was that of a researcher collecting data. My role during the interviews was not that of nurse, educator, medical provider, counselor, family member, or friend. I do not have any previous or current professional or personal relationship with the participants.

Interview Experience

It is important to recognize a person's own interviewing techniques and experiences. An evaluation of my skills assisted in identification of improvement needed in interviewing skills and data collection. As a registered nurse and nurse educator, interviewing skills are something that I have had to use regularly with patient and student interactions. Nurses having clinical experiences are inclined to have a greater aptitude to productively actualize the role of researcher interviews and the establishment of researcher-participant role than some other social researchers (Borbasi et al., 2005). Despite this aptitude, I recognized weaknesses that require addressing. I regularly have

the role of caretaker, educator, and counselor; these roles had to be abolished when interacting with study participants. Medical professionals, nurses, are inclined to control gathered data and the speed at which the data are gathered. The interview process was controlled by the participants and was a more relaxed environment and pace than that of a medical interview.

Methodology

Setting and Sample

Indirect recruitment was used to recruit participants. Indirect recruitment means having indirect contact with potential participants (Gul & Ali, 2010). This type of recruitment includes elements such as placing promotional materials in stores, clinics, churches, and such. I created a flyer, that can be found in Appendix A, to assist with the recruitment of participants. The flyers were printed on neon-colored paper and had the information about the study in both Spanish and English. The flyers stated that interviews would be conducted in English. Individuals who saw the flyers may not have met the study criteria but may have known someone who did and, thereby, could pass the information on.

To indirectly recruit participants, I approached local sites such as stores, recreational centers, public libraries, and Hispanic American-owned businesses to post the flyer. The flyer contained information related to study purpose, who is eligible to participate, location of study, time commitment, incentive, language (English) that interviews will be conducted in, and my contact information. The flyer was printed in both English and Spanish and was posted at the recruitment sites. I left the flyers posted

for 2 weeks and waited for potential participants to contact me. After 2 weeks, I did not have contact from 12 participants who met the inclusion criteria and who were willing to participate in the study. I left the flyers in place an additional 4 weeks. Participants were recruited by employing snowball sampling. Snowball sampling is a method of sampling where the researcher includes participants who are referred from previous participants (Trochim & Donnelly, 2008). A snowball sample can be used when the target population might be hard to find (Trochim & Donnelly, 2008).

Potential participants were prescreened to make sure they met the eligibility criteria. The prescreen tool can be found in Appendix B. To be included in the sample, all participants had to be at least 18 years old, self-identify as Hispanic American origin, have one or more male children between the ages of 11- and 13-years-old, and reside in Weld County, Colorado. The Hispanic American population in Weld County has higher rates of reportable STIs than does the non-Hispanic population (Colorado Department of Public Health and Environment, 2018), thus justifying working with this group. The participants had to be the natural or adoptive parent of the child; all other caregivers were excluded. When potential participants contacted me about participating in the study, I used the prescreening questions to be certain the potential participants met the eligibility criteria. Those who met the criteria were asked to participate in the study. If they expressed interest in participating, a date and time to conduct the interview was scheduled with them.

Sample Size

In qualitative research, there are no set rules for sample size (Patton, 2002). In phenomenological research, sample sizes are generally much smaller than what is required in quantitative studies (Creswell, 2013; Marshall, Cardon, Poddar, & Fontenot, 2013). Researchers employing qualitative methodologies are not likely to concur on a precise number required for qualitative study; however, it is agreed that a variety of factors affect the needed sample size (Marshall et al., 2013). Sample size is dependent upon the study's purpose, questions, what will be useful, and what can be done with available time and resources (Creswell, 2013; Denscombe, 2014; Patton, 2002). Other contributing factors to sample size include heterogeneity of the population, criterion-based sampling, several samples in one study, quality of interviews, nature of data collection methods, researcher's experience, and resources (Marshall et al., 2013).

The qualitative researcher's goal is to comprehend meaning rather than to develop generalized hypotheses (Crouch & McKenzie, 2006). Phenomenology is concerned with the depth and the extensiveness of experiences (Patton, 2002), meaning that collecting more data does not automatically mean additional information will be obtained. Sample sizes that span between five and 25 participants are deemed to be suitable for an in-depth, phenomenological study (Creswell, 2013). Based on commitment to individuals, allowing for their autonomy and recognizing their uniqueness, Reid et al. (2005) reported that 10 participants is at the high end of most recommendations for sample size. Reid et al. emphasized that a smaller number of participants studied in greater intensity is superior to a larger number of participants studied at a more superficial level. In studies using

qualitative interviews, it may be more advantageous to consider the contribution of new knowledge rather than the number of participants (Malterud et al., 2016). One such approach is the cumulative approach, where the researcher adds participants to the sample until such time enough data are obtained and where no further benefit would be obtained from adding to the participant number (Denscombe, 2014), thereby reaching saturation. The researcher employing phenomenological interviews seeks to look beyond first appearance and manifest meaning; this requires the researcher to be immersed in the field, to create interactions with the participants, and to employ contemplation to address the problem in depth (Crouch & McKenzie, 2006). Taking this into consideration, a smaller number of participants will enable the researcher's intimate association to the participants and enhance the in-depth investigation (Crouch & McKenzie, 2006).

According to Malterud et al. (2016), there must be an opening estimate of sample size throughout the process. It is recommended that five to 25 participants can accomplish a productive phenomenon description (Creswell, 2013; Denzin & Lincoln, 2011). According to Marshall and Rossman (2015), researchers of most current phenomenological health research studies lean toward including one to four informants. Guest et al. (2006) concluded that if the researcher's objective is to explain a shared perception, belief, or behavior amid a comparatively homogeneous group, then a sample size of 12 participants was expected to be enough. Homogeneous sampling was employed in this study. There is not a precise number or mathematical formula to use to determine the number of participants required for an effective qualitative phenomenological study (Patton, 2002). Although sample size cannot be predicted, a

sample of 10 is deemed enough for an in-depth phenomenological study, and the researcher can attain saturation with 10 or fewer participants (Patton, 2002). I acknowledged that if saturation was not met, additional participants would have been needed to be included in the study. Saturation in qualitative research is difficult to define (Bowen, 2008). The term saturation represents the moment in data analysis where the same themes reoccur. It is a point in qualitative research where there are adequate data to confirm the research questions can be answered (Bowen, 2008).

Instrumentation

The researcher is the main tool for the collection of data in phenomenological research (Moustakas, 1994). I was the primary tool for the collection of data. In phenomenological research, the most common method to collect data is interviewing (Moustakas, 1994). An interview was used to learn about the beliefs and attitudes of Hispanic American parents of male children, aged 11 to 13 years regarding HPV vaccination. The interview guide, that can be found in Appendix C, was developed and based on the HBM and is a semi structured inventory of questions. I investigated the parents' beliefs and attitudes regarding vaccination and the HPV vaccination for their male children. The HBM has been used to comprehend individuals' behavior, particularly behavior related to health such as vaccinations (Glanz et al., 2015). The researcher using this model focuses on beliefs, attitudes, and interactions that inform and shape health behaviors.

The researcher develops and uses an interview guide with open-ended questions to avoid inflicting personal thoughts or ideas on the participants and biasing responses. I

instituted an atmosphere that was friendly and conversed in a natural manner with the participants. I also facilitated the interviews, directing the participants from one question to another. The interview guide was reviewed by three pediatric health subject matter experts, one who was also a public health subject matter expert. Based on the experts' feedback, the interview guide was amended. The initial guide provided to the experts had 17 questions; all three of the experts expressed that the number of questions should be limited to 12 or fewer. Two of the experts expressed that a few of the questions appeared redundant so those questions were removed. The questions provided to the experts and their comments can be found in Appendix D. To provide consistency, the same questions were asked of all participants. The questions were a guide, not a script. The questions were outlined in such a way as to illicit the most direct responses.

Pilot

Conducting a pilot study is a small-scale pretest for a research instrument such as a questionnaire or interview guide (Janghorban, Roudsari & Taghipour, 2013).

Conducting a pilot study helps the researcher become familiar with unanticipated issues prior to the actual study being conducted (Janghorban et al., 2013). This provides the novice qualitative researcher a broader view and may help prevent encountering unmanageable problems (Janghorban et al., 2013). A pilot study may also help the researcher decide if any modifications are needed (Maxwell, 2013). Conducting a pilot study can give the researcher opportunity to improve their skills in conducting interviews (Janghorban et al., 2013). The pilot study also assisted me to see how well the data analysis process worked for identifying emerging themes.

Two pilot interviews were conducted using the interview guide. Two Hispanic American parents who met the inclusion criteria were interviewed to help refine the interview guide and to get a feel for how the interviews would go. The pilot interview participants were the first two who responded, met the inclusion criteria, and were willing and able to meet for the interview at the designated time and place. The two participants of the pilot interview received a \$20 gift card for their time.

The same procedures were followed for the pilot study as were followed for the actual study, including recruitment techniques. Participants read and signed an informed consent form (Appendix E). I answered any questions the participants had before they signed the consent. The interviews were audio recorded. The pilot study was used to test the adequacy of the study instrument and was not included in the data analysis of the study.

Interviews

Interviews were conducted in English and took place in a private and comfortable setting at a local public library study room. At the opening of the interview, I greeted the participants, gave the participants a general introduction and a summary of the confidential character of the research study. I also advised the participants their participation was voluntary, the participants could decline to answer any questions, and the participants could withdraw from the study at any time. Prior to asking the interview questions, I asked the participants to read and sign the consent form. The consent form included their permission to be audio recorded. The participants were also asked if they had any questions, prior to signing. I approximated that each of the interviews would

take between 24 and 36 minutes to complete. This allowed the participant 2 to 3 minutes to answer each question. For simplicity the flyers read 25-40 minutes. At the end of the interview, each participant was compensated with a \$20 gift card for their time. The last question on the interview guide allowed the participants to provide supplemental information that may not have been exposed earlier in the interview process.

Data Management and Analysis

Data management is a way to store, code, comprehend codes, and present findings (Smith & Firth, 2011). Data analysis included the following: reviewing data that was collected, reviewing and transcribing the audio recording of the interviews, identifying the data that was pertinent to the research questions, classifying and organizing repeated patterns and ideas into logical groups, organizing the groups by themes, evaluating and reporting the findings. I audio recorded the interviews to ensure accuracy. The recordings were used to ensure correctness. The recordings were uploaded into MAXQDA, software program, for transcription. I also took field notes during the interview process. Field notes helped with the documentation of contextual information. The field notes included the date, time, place, and observations I made such as the participants body language.

The purpose of this descriptive phenomenological study was to categorize and develop patterns and themes of the participants' responses. This assisted in explaining the beliefs and attitudes of Hispanic parents of male children, aged 11 to 13 years regarding HPV vaccination. Bracketing was consistently and deliberately applied; any presumptions I had regarding the subject were barred to capture the actual participants'

experiences. I included the exact participant statements in the narrative. I listened to and reviewed each recorded interview from the start to finish at least two times each to ensure accuracy and to obtain comprehension of the whole. I remained open to understand the beliefs and attitudes of the participants.

I analyzed the data employing Miles and Huberman's (2014) data analysis model. Miles and Huberman (2014), offer guidance for assembling and analyzing primarily text-based data. Miles and Huberman offer signature works for analyzing qualitative data. These methods are designed for researchers who want to honor what human participants have to say. These methods assisted me to look at the data thematically to derive the principle meaning from the participants' responses.

Miles and Huberman's (2014) model has three phases for data analysis. These include data reduction, data display, and conclusion drawing and verification. As data are reduced and condensed meanings begin to form. Data can be coded descriptively, and an appropriate visual data display makes the meaning of the data easier to understand. Miles and Huberman's model allows the researcher to stay close to the data.

Data reduction is the process of selecting, focusing, simplifying, abstracting, and transforming data that emerge in the written field notes and/or transcripts (Miles & Huberman, 2014). During this step, the mass of data including the interview transcripts and field notes are reduced and organized. During this process I decided which data chunks to code and which to pull out, and which codes best summarize the chunks. The summaries were coded, and all data was kept in case it needs to be accessed later, as unexpected findings may require the data be reexamined.

I first began by coding the data. First cycle coding is the initial summary of segments of data (Miles & Huberman, 2014) and entailed descriptive coding. A descriptive code gives a label to summarize data in a short phrase or single word (Miles & Huberman, 2014). A start list of coding was not used, rather inductive coding took place. This allowed codes to emerge progressively with data collection (Miles & Huberman, 2014). This provided inventory for indexing and categorizing (Miles & Huberman, 2014). Not every portion of the interview transcripts or field notes were coded as there were parts that were trivial or useless data (Miles & Huberman, 2014).

Second cycle coding, or pattern coding, is a method to group those summaries into categories, themes or constructs (Miles & Huberman, 2014). Pattern codes are explanatory and distinguish emerging themes. The pattern codes help concentrate large amounts of data into smaller analytical units, helping the researcher create an integrated scheme for understanding. During this process, I looked for the frequency of key phrases and ideas to find patterns that may offered viewpoint for theme development. I placed data in a chart, including the codes, to organize the material and assist with analysis.

Data display is the second phase of Miles and Huberman's model (2014). The data display provides an organized compilation of the data that helps discern patterns and permits conclusion drawing (Miles & Huberman, 2014). This is a continual process and was worked on during the coding. The data were displayed in a chart.

The third step is conclusion drawing and verification. This step is to formalize and synthesize the researcher's thinking into coherent explanations (Miles & Huberman, 2014). An assertion is to declare a statement of collective synthesis that is supported by

data evidence (Miles & Huberman, 2014). A proposition is a statement that offers a conditional event, an if and then or why because proposal (Miles & Huberman, 2014). Assertions and propositions are focused ideas of major patterns and themes about research findings that the researcher can confidently say about their study (Miles & Huberman, 2014). During this process, I focused on describing the reoccurring themes surrounding the beliefs and attitudes of Hispanic parents of male children, aged 11 to 13 years regarding human papillomavirus (HPV) vaccination. Connections were made between the ideas of the codes to create larger clusters of ideas, themes. These themes assisted in making conclusion of what the main thoughts were. The predominant themes answered the research questions.

I used MAXQDA to assist with data management and analysis. The data were transcribed, reviewed, categorized, organized and reworked into themes of new components of established data (Creswell, 2013). Coding is the process of organizing and sorting the data. Color codes were used to label, compile and organize the data; similar concepts, words, and themes were highlighted in the same color. A variety of highlighted colors were used. I had folders denoting areas of the interview questions, such as one folder for vaccinations in general, one for HPV infection and vaccination, and one for males. Analysis began with the descriptive coding of the interview transcripts. As described by Creswell (2013) and Gibbs & Taylor (2005) these were coded into groupings of themes which summarized and synthesized ideas.

Issues of Trustworthiness

Phenomenological studies require that the researcher aim for trustworthiness to safeguard accurate reporting. Trustworthiness is used to evaluate qualitative research by considering the criteria of credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985).

Credibility

Credibility has to do with internal validity, it ensures the research is robust, rich, comprehensive and well developed (Lincoln & Guba, 1985). The credibility of the current study refers to the validation and correctness of the data acquired from the participants. To address credibility, I acquired information directly from individuals who are knowledgeable of the phenomena of interest to ensure comprehension of the participants' experiences. I used member checking to control bias. Member checking, or respondent validation, occurs during the data collection process by asking the participants for feedback about the accuracy of the data and the researcher's interpretation of the data (Maxwell, 2009).

Validity, as credibility, has to do with ensuring that the conclusions being drawn from the data are credible, defensible, affirmed and able to withstand alternative explanations. Because the researcher is the primary research tool, qualitative research is naturally subjective (Starks & Trinidad, 2007). The researcher decides on the coding, themes, isolating and considering in a new way (Starks & Trinidad, 2007). It is imperative that the researcher be upfront and attentive of their perspectives and beliefs (Starks & Trinidad, 2007). Bracketing is a means of demonstrating validity, that is

putting aside one's own preconceptions, to assist the researcher in upholding transparency and self-reflection (Starks & Trinidad, 2007). I remained objective and reported factual data to provide study substantiation. I kept a research journal to describe the procedural process and field notes.

Validity in data collection will be safeguarded by audio recording all interviews and transcribing interviews verbatim. All interviews followed the interview guide to assist in consistency with each participant interview. The interview transcripts were typed and kept in a password protected computer and on a jump drive that I have in a locked file. The transcribed information was made available to participants for their review; the participants were able to review their interview and provide feedback.

Transferability

Transferability, or external validity, refers to the degree to which the findings are applicable, or can be generalized, to other settings or contexts (Lincoln & Guba, 1985). Transferability can be created by offering information about the participants, method, data analysis, and the results thereby allowing the audience the chance to make a meaningful decision about the work.

Dependability

Dependability is the stability of data over time and conditions; in other words, the study is accurate and consistent (Lincoln & Guba, 1985). Dependability requires evidence that findings are reliable and could be repeated (Lincoln & Guba, 1985). I ensured dependability by making certain the data collected, data analysis, and reporting

of data were all correct and reliable. An audit trail was also created to address dependability.

Confirmability

Confirmability is the degree to which the research outcomes can be confirmed or corroborated by others. This requires evidence that findings are participant directed and not directed by the researcher (Lincoln & Guba, 1985). An audit trail was created to address dependability and confirmability. An audit trail is a clear description of the research from the development to the reporting of findings. An audit trail is keeping records of how the study is conducted. The audit trail includes all field notes.

Ethical Concerns

Ethical procedures and protection of human rights were initially addressed when seeking approval from the Walden University institutional review board (IRB) to conduct the study. All participants were required to meet the inclusion criteria. The participants were not exposed to any substantial risk. All participants were aware of their rights prior to participation.

The researcher is obliged to be responsive to vulnerable populations, unjust power associations, and putting participants in jeopardy (Creswell, 2013). To be acknowledged are study purpose and how data will be used with the participants. Participants were made fully aware of the researcher's study purpose and how data was to be used. Participants were made aware that their participation was voluntary, and they could choose not to answer questions and could drop out of the study at any time.

When the participants acknowledged understanding, they read and signed a consent form prior to being interviewed. All participants needed to read the informed consent form (Appendix E) which provided participants with the central purpose of the study, assured them of participant confidentiality, and addressed potential risks, as well as provided any anticipated benefits of the research. For data accuracy, the consent included agreement to have the interviews audio recorded. I answered any questions prior to the participants signing the consent form.

Interviews were conducted at a local public library in a private study room. During the interviews, if the response was not understood, I asked the participant to explain the response. When participants confirmed or corrected statements, they were also allowed the opportunity to add additional information in their clarification. Participants were also offered the opportunity to review transcripts for their approval and/or to make necessary changes.

Upright ethical decisions must also be made in the analysis and interpretation phases of study (Creswell, 2013). Participant privacy must be protected. The data collected must be reserved for a realistic time period; per Walden's IRB this is 5 years. After this time period the data are to be discarded properly. During the interpretation process, I supplied accurate accounts. When writing the results, language and wording that might have been considered biased were not applied. Data were not falsified, suppressed, or invented.

To attract participants and maintain their participation throughout the interview, a nominal incentive of a \$20 gift card to Target or Walmart was offered to the participants.

This amount was meant to demonstrate good faith for participant engagement but was not large enough to be coercive.

Summary

In chapter three, I discussed the qualitative phenomenological research method that was used to comprehend Hispanic parents' perceptions of HPV vaccination for their male children. Twelve participants from Weld County, CO were recruited. Interviews were conducted using an interview guide with open ended questions. The role of the researcher, data analysis plan, trustworthiness issues, as well as ethical procedures were reviewed. In chapter four, I will discuss study data collection, analysis and findings.

Chapter 4: Results

Introduction

In this study, I explored and described the beliefs and attitudes of Hispanic American parents of male children aged 11 to 13 years regarding HPV vaccination. In this chapter, I discuss the pilot study, the study, data collection, analysis, and findings.

Research Questions

The following research questions were used for the study:

RQ 1: What are the attitudes and beliefs of Hispanic American parents of male children, 11-to 13-years-old, regarding HPV vaccination for their male children?

RQ 2: What are the HPV vaccination concerns of Hispanic American parents of male children aged 11 to 13 years?

RQ 3: What factors contribute to the decision-making process for Hispanic American parents of male children age 11-13 years to vaccinate or decline HPV vaccination for their male children?

Pilot Study

A pilot study was conducted to determine the feasibility and appropriateness of the interview questions. The pilot study was performed with two participants. Each interview was conducted individually in a private study room at a local public library. The pilot study participants were exposed to the same measures of the interview protocol, and each of them signed an informed consent. Participants were advised that they had the choice to stop the interview at any time without reason. Participants each received a \$20 gift card of their choice.

The participants confirmed that the interview questions were clear and understandable. Participants felt that the questions would offer significant information to the study. No changes were made to the interview questions.

Settings

All interviews were conducted in a private setting. To safeguard privacy, I conducted the interviews in a study room at a public library. No personal or organizational conditions were present to influence participants at the time of the study. Once the consent form was signed, the interview began. Interview questions were asked in the sequence as they appear on the interview guide (Appendix C). A total of 12 interviews were conducted, not including the pilot study participants. All interviews were conducted in English.

Demographics

The participants interviewed all self-identified as Hispanic American of Mexican descent. Participants were adults aged 18 years and older, and all 12 were female; there were no males interviewed. All participants were the natural parent of at least one male child between 11- and 13-years-old. All the participants reside in Weld County Colorado. Ages of participants ranged from 27 to 41 years, with the majority being in their 30s; most of the participants had completed high school and half had at least some college education. Participant demographics are in Table 1.

Table 1

Participant Demographics (N=12)

Participant	Participant's Age	Participant's Child's Age	Participant's Educational Level
01	29	11	High School Graduate
02	35	12	Associate Degree
03	36	13	GED
04	32	11	11 th Grade
05	28	11	High School Graduate
06	33	11	Associate Degree
07	41	11	Associate Degree
08	35	11	High School Graduate
09	27	12	High School Graduate
10	34	12	Some College
11	35	11	Bachelor's Degree
12	39	13	Some College

Data Collection

I recruited the 12 participants by posting flyers (Appendix A), printed in both English and Spanish, in public libraries. The responses to the interviews started off slowly. I found satellite libraries to place additional flyers. Once I started receiving

responses, they were about two a week. Some snowballing recruitment did occur, as some participants invited others they knew. Potential participants responded to the letter of invitation via phone messages and text messages; none of them responded via e-mail. Once contact was made, all participants were prescreened with the same prescreening tool found in Appendix B to ensure that they met the study criteria.

To build rapport and create readiness for the study, at the beginning of each interview session, I started with a brief introduction of myself and the study. I reviewed the study purpose, the interview protocol, data storage, and confidentiality. Participants were advised that they could choose to end the interview at any time without providing a reason and without consequence. Each participant was required to read the consent form and allowed to ask questions before signing the form. The consent form had to be signed before proceeding with the interview. All the participants declined a copy of the consent form.

Interview questions were asked in the sequence as they appear in the interview guide which is found in Appendix C. Each interview was recorded on a laptop computer voice recorder. The interviews took place between September and November 2018. Each interview was transcribed within MAXQDA on a personal computer. At the end of each interview, the participants were given a \$20 gift card of their choice.

Data Analysis

Although the sample size in this study may be considered small, the homogeneous sampling provided an accurate description of findings as data saturation was reached with no new themes emerging. Guest et al. (2006) concluded that if the researcher's objective

is to explain a shared perception, belief, or behavior amid a comparatively homogeneous group, then a sample size of 12 participants is expected to be enough. Patton (2002) deemed 10 or fewer participants enough for a phenomenological study to attain saturation. The 12 interviews provided adequate data to answer the research questions, thereby reaching saturation.

The 12 interview recordings were uploaded into MAXQDA on my personal computer. Each recording was then transcribed using the MAXQDA transcription mode. The initial data coding was completed using the MAXQDA software. Transcripts were reviewed several times to ensure coding was accurate and complete. Final coding and thematic analysis were completed manually to sort out pertinent themes. I used 12 interview questions to collect data for research questions. The answers to the interview questions were categorized into sections based on occurrence frequency. Participants were asked about HPV vaccine, vaccines in general, and vaccines for their male children.

To begin, the data transcripts were reduced and organized. This is the process of selecting, focusing, simplifying, abstracting, and transforming data. During this process, I read through each transcript line by line and decided which data chunks to code and which to pull out. Key words and phrases that were common in the study were identified. The meaningful units of central ideas emerged. MAXQDA coding feature was used to pull out meaningful data chunks and assign them codes. The central ideas in the data led to the code names. As an idea in the data fit with the code, that section was pulled out and coded. For example, when the central idea of vaccination preventing illness arose in the data, that chunk of data was tagged with the code prevent. All data were kept in case the

information was needed to be accessed later. Unexpected findings could require the data to be reexamined.

During the first cycle coding, inductive descriptive codes were used to label data. As meaningful text emerged, I assigned descriptive codes to the segmented data. The codes identified central ideas. I continued the process until all data had been segmented. Codes were reapplied each time an appropriate segment of data that had the same idea was encountered. Although the entire transcripts were kept; not every portion of the interview transcripts were coded.

During the second cycle of coding, I grouped the codes into themes. This entailed looking for frequency of key phrases and ideas to find patterns that led to theme development. Three major themes resulted. These were safeguarding the child, health provider advised, and no vaccination concerns. Each transcript was reviewed again to ensure that the themes accurately reflected the participants' experiences. Table 2 shows the resultant themes that evolved from the codes.

Table 2

Development of Themes

Central Ideas	Codes	Themes
Vaccination prevents disease/illness Vaccination protects child Vaccines are good for child's health	Prevent Protect Good (for health) Important	Safeguarding the Child
Providing for the child's best health is important and it is a parent's responsibility		
If the doctor or nurse recommend vaccine it must be good	Doctor/Pediatrician Recommendation Nurse Recommended	Health Provider Advised
Concerns	Issues Concerns Problems	No Vaccination Concerns

Themes**Theme 1: Safeguarding the Child**

Safeguarding is the protection, maintenance, or defense of the child. This theme related to the idea of the parents wanting to safeguard their children. The most reoccurring codes related to this theme were prevent and protect. The title of the theme came as a result of over two-thirds of the participants stating in some way that if a vaccine provided protection from or prevention of an illness or disease then it would be something the participants would want their child to have. As stated by P10, "I just want

to protect my child” and P12 “That’s what we have to do to protect our children.” Some participants felt that the vaccination was good in that it would protect their child from HPV. P06 stated, “If it (HPV vaccination) can possibly prevent the spread of it (HPV infection) then it would be a great thing.” Most of the participants verbalized that they felt vaccination in general was good. P12 stated, “I think it’s a good thing.” A common reason the participants indicated that the vaccination was a good thing was it protected, or safeguarded, their child. P03 commented, “It’s good to vaccinate your child.....it helps a lot with them preventing illness.” The participants were concerned with their role and responsibility in their child’s health. The vaccination safeguards the children, and this would be part of the parents’ responsibility. All the participants were concerned with what was best for their child’s health, and nearly a half stated that the vaccination was important to the health of the child. P01 commented, “I believe that they (vaccinations) are important for his health.” P05 also commented, “They (vaccinations) are important... they will help him to not get sick.” The participants all seemed to have the same goal of safeguarding their child, and providing vaccination was one way the participants felt they could do this.

Theme 2: Health Provider Advised

The second theme identified was health provider advised. This emerged from the codes that showed how the participants viewed vaccination being promoted by a healthcare provider. The codes in this theme were all a part of a vaccination being recommended by a doctor or nurse. All the participants saw the recommendation of a health professional as a positive factor for vaccination. P04 stated, “if the doctor says

they are needed we get them.” Some participants alluded that was all that was needed to decide to vaccinate their child. P06 stated, “No issues if its doctor recommended” and P12 stated, “I get whatever the doctor recommends.” Some participants commented that they generally do what is recommended. As stated by P02, “We try to follow through with what the doctor recommends.” When asked who they trusted the most for vaccination information, all participants stated that the doctor is who they trusted most for information on vaccines. All the participants believed that if the doctor recommended a vaccination, then it must be good for their child. Nearly half of the participants cited that they would trust information on the Internet/ social media about vaccination the least.

Theme 3: No Vaccination Concerns

The third theme identified the lack of vaccination concerns. Most of the participants did not voice any concerns about HPV vaccination risks. This theme emerged from the codes that indicated that participants did not have concerns about the vaccination. Most of the parents stated that they had not had problems with vaccines before. P08 stated, “I have never had a bad experience with vaccinations for my children.” P12 commented, “We have never really had any problems with vaccinations. Because most had not had problems with vaccinations before, those participants voiced no concerns with the HPV vaccination. P01 said, “No issues or concerns.” P03 stated, “Never had an issue.” The participants cited the benefit of the vaccine over the risks. P02 said “benefits over risks.” P05 stated, “Know the pros and cons....will help him not get sick.” The participants’ concern was with protecting or safeguarding their child. The

participants did not have concerns about the vaccine because they felt the benefits of the vaccine was greater than the risk it might pose.

Discrepant Cases

During the data collection, it was found that three of the participants voiced concerns about vaccination for their child. Although all the participants agreed that vaccination was a good thing and that they would have their child vaccinated against HPV, there were three people who stated that they did have concerns. These concerns will be discussed in greater depth in the results section below.

Evidence of Trustworthiness

Phenomenological studies require that the researcher aim for trustworthiness to safeguard accurate reporting. Trustworthiness is used to evaluate qualitative research by considering the criteria of credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). To enhance this study, direct quotes from the participants were included.

Credibility

Strategies employed to establish credibility included acquiring information directly from the individuals who are knowledgeable of the phenomena. Researcher neutrality was also used to address credibility by keeping an open mind to recognize and understand the findings as they arose. Respondent validation was used during the data collection process; this entailed inviting the participants to review the transcripts of their interview. Three participants chose to review their transcripts. There were no changes in responses.

Transferability

Transferability, or external validity, refers to the degree to which the findings are applicable, or can be generalized, to other settings or contexts (Lincoln & Guba, 1985). Human experiences are unique and contextual (Patton, 2002). In this study, I focused on Hispanic American parents residing in Weld County, Colorado. Therefore, it may not be transferable to other populations. However, it might be appropriate for others to consider when researching parents' perceptions of HPV vaccination.

Dependability

Dependability is the stability of data over time and conditions; in other words, the study is accurate and consistent (Lincoln & Guba, 1985). Dependability requires evidence that findings are reliable and could be repeated (Lincoln & Guba, 1985).

Dependability was ensured by making certain the data collected, data analysis, and reporting of data were correct and reliable.

The findings of the study are supported by descriptions of the participants' experiences, so this may contribute to dependability. However, a different group of participants may have entirely different lived experiences from those in the present study. Hence, it is not possible to guarantee the consistency of phenomenological research findings (Finaly, 2009).

Confirmability

Confirmability is the degree to which the research outcomes can be confirmed or corroborated by others. It is the objectivity in qualitative research, or the degree of neutrality in the findings (Patton, 2002) This requires evidence that findings are

participant directed and not directed by the researcher (Lincoln & Guba, 1985). The study findings are solely founded on the participants' statements. Bracketing was employed to adjourn my personal beliefs and assumptions. An audit trail was created to address dependability and confirmability. All records of interviews: the audio recording and transcripts will be kept for a period of at least five years, as required by the university.

Results

Next was to draw conclusions describing the reoccurring themes surrounding the beliefs and attitudes of Hispanic parents of male children, aged 11 to 13 years regarding HPV vaccination. The three major themes were safeguarding the child, health provider promoted, and no vaccination concerns. The themes assisted in addressing the research questions. Overwhelmingly, the participants had positive attitudes regarding HPV vaccination for their male children and they believed that the vaccination was a good thing that would contribute to the health and wellbeing of their child. Although, some participants voiced concerns about vaccination, most of the participants reported that if the vaccine in some way protected their child, then the participants would want their child to have it.

Research Question 1

The first research question was what are the attitudes and beliefs of Hispanic American parents of male children 11 to 13 years-old regarding HPV vaccination for their male children?

The themes, safeguarding the child and health provider advised, assisted in answering this research question. Results overwhelmingly indicated that parents had a

positive attitude toward HPV vaccination, and the parents believed that the vaccination was a good thing in that it would protect their child. P06 stated “If it (HPV vaccination) can possibly prevent the spread of it (HPV infection) then it would be a great thing.” Most of the participants felt that providing for the child’s best health is important and it is a parent’s responsibility. The participants felt that vaccination protects their child from disease or illness, so thereby is good for their child’s health.

The vaccine being promoted by a healthcare provider contributed to the participants’ positive attitude and willingness to vaccinate their child. More than half of the parents believed that if the vaccine was recommended by a healthcare provider then it must be good. The participants also stated they would get their child vaccinated if it was recommended by their doctor. As stated by P04 “if the doctor says they are needed we get them” and P12 “I get whatever the doctor recommends.” All the parents also trusted healthcare professionals the most for information about vaccinations. P05 stated the person they would trust the most would be “nurses and doctors” and P11 said “the health department.”

Research Question 2

This research question was what are the HPV vaccination concerns of Hispanic American parents of male children aged 11 to 13 years?

Most participants did not voice any concerns about HPV vaccination risks. Recent studies have indicated that although parents trusted their healthcare providers’ information, parents still had concerns about vaccine side effects and safety (Eby; 2017; Paul et al., 2014). The theme no vaccination concerns was used address the second

research question. Overall, most of the participants voiced no concerns about vaccination. P01 said “No issues or concerns” and P03 stated “Never had an issue.” Most participants commented that they had never had problems with vaccines. Therefore, the participants didn’t have any concerns about the HPV vaccination. P08 stated “I have never had a bad experience with vaccinations for my children.” P05 stated “Know the pros and cons....will help him not get sick.” Most participants were more concerned about protecting their child from disease or illness than from the possible risk of the vaccine. P02 said “benefits over risks.”

Only three of the 12 participants mentioned a concern, and each voiced a different concern. One cited side effects as a concern, another cited severe reactions, and another the fear of the possibility of chemicals being injected with the vaccine. What was common among all the participants was their concern with safeguarding their child’s health. As stated by P10 “I just want to protect my child and make sure he doesn’t have any problems.” Despite the concerns mentioned by three parents, the parents still said they would get their child vaccinated against HPV. P12 said “what we have to do to protect our children.”

Research Question 3

This research question was what factors contribute to the decision-making process for Hispanic American parents of male children age 11-13 years to vaccinate or decline HPV vaccination for their male children?

The major themes, safeguarding the child and health provider advised, also assisted in answering this research question. The beliefs and attitudes of parents play a

role in their decision-making process regarding HPV vaccination. The participants believed the vaccine was good and important because it protected their child. P12 stated "I think it's a good thing" and P10 "I think it's good." The belief that the vaccine was good for their child contributed to parents wanting their child vaccinated. The most reoccurring codes were prevent and protect which are linked to the safeguarding child theme. It is apparent that safeguarding their child was a major contributing factor to their decision-making process regarding the HPV vaccination.

Another factor in the participants' decision-making process was if the vaccine was recommended by a healthcare provider. All the participants stated they trusted doctors the most for information on vaccination and that if the doctor recommended a vaccine, they would get it for their child. P02 said "I like to talk to the doctor and see what um vaccines they recommend" and P04 said "if the doctor says they are needed." Even the participants who voiced concerns about the vaccination said if the doctor recommended it, then they would get it for their child. None of the participants mentioned cost being a factor in their decision-making process.

Summary

In this study, I explored the beliefs and attitudes of Hispanic parents of male children aged 11 to 13 years regarding HPV vaccination. The research questions were addressed through the participant interviews. The results indicated participants in this study overwhelmingly had positive attitudes regarding HPV vaccination. A major theme that emerged, safeguarding the child, surrounds the idea of the parents wanting to do just that, safeguard their children by protecting them and preventing them from getting an

illness or disease. This supports the participants beliefs that vaccination is a good thing and is an important part of ensuring their children's health. Their decision-making was founded in this theme as well, as the participants based their decision process on safeguarding their child. Most of the parents did not express concerns about the vaccine but rather expressed their desire to protect their children and ensure their health. Additionally, the theme health provider advised, contributed to the participants' positive attitude toward the vaccine. All the participants saw the recommendation of a health professional as a positive factor for vaccination.

In chapter four, I discussed the study data collection, analysis and findings. Employing the results of the analysis, in chapter 5 I will present a discussion of findings, recommendations and conclusions will be provided as well as implications for social change

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

A descriptive, qualitative phenomenological study was conducted to explore and describe the beliefs and attitudes of Hispanic American parents of male children, aged 11 to 13 years, regarding HPV vaccination. This was accomplished by using open-ended, semi structured interview questions to interview 12 participants.

The Hispanic American population is currently the largest ethnic group in the United States, and their numbers are estimated to increase (CDC, 2015d). Hispanic American men and women suffer a disproportionately higher rate of some cancers related to HPV infection than do European American men and women (CDC, 2016a). Despite the possibility for prevention of HPV causative cancers, HPV vaccine uptake amid Hispanic American adolescents in the United States is under that of the national goal; of 80% of adolescent males to complete the three-vaccine series (Office of Disease Prevention and Health Promotion, 2016). Previous scholars have identified that sociocultural background, beliefs, and experiences drive vaccine decisions (Griffioen et al., 2012; Katz et al., 2013). However, it is still not clear what factors influence HPV vaccine acceptance and uptake amid parents of boys (Tan & Gerbie, 2017). Additionally, few researchers have focused on HPV vaccination among Hispanic American males (Reiter et al., 2014).

Vaccination compliance for children is driven by the child's parents. Parents must decide whether or not to immunize their child (Harvey, Good, Mason, & Reissland, 2015). Therefore, it is vital to identify parental judgment processes related to childhood

vaccination. Comprehension of parents' perceptions regarding HPV vaccine is important to nurture vaccination acceptance.

I found that participants had positive attitudes regarding HPV vaccination for their male children, and the participants believed that the vaccination was a good thing that would contribute to the health and wellbeing of their child. Although some participants voiced concerns about vaccination, most of the participants reported that if the vaccine in some way protected their child, then they would want their child to have it.

This chapter includes a summary of the study results, interpretation of the qualitative findings, discussion of the findings, limitations of the study, implications for social change, and recommendations for future research and action.

Interpretation of the Findings

Although I confirmed findings of some previous studies, I disconfirmed others. Despite vaccines being one of the most effective public health interventions for prevention of infectious disease (Olpinski, 2012), an increasing number of parents perceive vaccination as unsafe and unnecessary (Dube et al., 2015; Eby, 2017). There are increasing numbers of parents who are refusing vaccines for their children (Olpinski, 2012). From 1990-1998, vaccine coverage for the recommended series was greater than 95% each year (CDC, 1999b) but since 1999, the percentage of vaccination completion for children has dropped more than 20% (CDC, 2017e).

Low levels of knowledge and understanding regarding HPV and the HPV vaccine have been recognized within the Hispanic American population (Fernandez et al., 2009; Hopfer, Garcia, Duong, Russo, & Tanjasiri, 2017; Vanslyke et al., 2008). Warner et al.

(2014) found that Latino parents in Utah reported having little knowledge about HPV vaccine and additionally that provider recommendation was lacking. This contrasted with the findings in this study, where most of the parents were aware of the vaccine.

Theme 1 - Safeguarding the Child

Contrary to some literature such as Warner et al. (2015) and Allen et al. (2012), I found that Hispanic American parents in Weld County Colorado viewed vaccination as a necessary measure to protect their child. Using RQ1, I aimed to address the attitudes and beliefs of Hispanic American parents of male children, 11-to 13-years-old, regarding HPV vaccination for their male children. I found that parents had a positive attitude toward HPV vaccination, and parents believed that the vaccination would protect their child. This theme assisted in answering RQ3 to address factors that contributed to the decision-making process for Hispanic American parents of male children, age 11-13 years, to vaccinate or decline HPV vaccination for their male children. The beliefs and attitudes of parents played a role in their decision-making process regarding HPV vaccination. The participants believed that the vaccine was important because it protected their child. Safeguarding their child was a major contributing factor to their decision-making process regarding the HPV vaccination.

Theme 2 - Health Provider Advised

Results from this study had similar results to that of Olshen, Woods, Ausitne, Luskin, and Bauchner (2005), in that parents valued pediatricians' advice, and despite HPV vaccine concerns, the vaccine was generally accepted by the parents. This study also had similar results as Ogunbajo, Hansen, North, Okoloko, and Niccolai (2016) who

found that parents believed in healthcare providers' recommendation and that the vaccine was important due to the benefit of it preventing disease. Likewise, Vogel, Appel, and Winker (2018) found that most parents' decision to vaccinate was based on wanting to protect their child from disease, and the vaccine had been recommended by their healthcare provider. This theme assisted in answering RQ3 to address factors that contributed to the decision-making process for Hispanic American parents of male children, aged 11-13 years, to vaccinate or decline HPV vaccination for their male children. All the participants stated that they trusted doctors the most for information on vaccination and that if the doctor recommended a vaccine, they would get it for their child.

Theme 3 - No Vaccination Concerns

I used RQ2 to address HPV vaccination concerns of Hispanic American parents of male children, aged 11 to 13 years. I found that most participants did not voice any concerns about HPV vaccination risks. Scholars have indicated that although parents trusted their healthcare providers' information, parents still had concerns about vaccine side effects and safety (Eby, 2017; Paul et al., 2014). Albright et al. (2017) found that some Spanish speaking parents in Colorado did not initiate the vaccine because they felt it would make their child become sexually active. None of the participants in this study voiced this as a vaccine concern. Overall, most of the participants voiced no concerns about vaccination.

Discrepant Cases

Only three of the 12 participants mentioned a concern, and each voiced a different concern. One cited side effects as a concern, another cited severe reactions, and another the fear of the possibility of chemicals being injected with the vaccine. Despite, their concerns, all parents stated that they would still get their child vaccinated if it was recommended by a healthcare provider.

Theoretical Framework Application

The HBM was employed in this study to assess the elements of Hispanic American parents' perceptions of HPV vaccination for their male children. The HBM was appropriate for this study because it emphasizes how and why people adopt or reject health behaviors. This model has been used in research to explain the change and/or maintenance of health-related behaviors (Glanz et al., 2015). The HBM was employed to develop the interview guide and to assist with data analysis in determining themes that stemmed from the data.

The constructs of the HBM are perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (Glanz et al., 2015; Rosentock et al., 1998); these constructs were recognized in this study. According to the HBM, the probability that a person will take action to prevent illness is dependent on an individual's perceptions that he or she is vulnerable to the condition as well as the severity of the consequences of the condition (Glanz et al., 2015; Rosentock et al., 1998). The participants' perceptions concerning the potential risk of their child contracting the disease and the potential risks of the vaccine addressed perceived susceptibility and

perceived severity. The value participants placed on their child receiving the vaccine addressed the area of perceived benefits. None of the participants voiced any perceived barriers, including cost, to their child being vaccinated. The participants being motivated by healthcare provider recommendation addressed the area of cues to action. Participants' confidence in protecting their child addressed the area of self-efficacy. Study findings related to the HBM are presented in Table 3.

Table 3

Study Findings Related to the Health Belief Model

Constructs of HBM	Explanation of how participants' responses related to HBM	Participants' responses to interview questions in terms of the HBM
Perceived susceptibility and perceived severity	Participants' perceptions concerning the potential risks of vaccine.	Majority of participants had no concerns regarding the vaccine. However, 3 of the 12 participants had concerns about vaccine safety
Perceived benefits	Perceived value of their child receiving the vaccine	All the participants thought the vaccine was important in that it would protect their child from disease/illness
Perceived barriers	Perceived blocks to their child getting the vaccine	None of the participants voiced any perceived barriers to their child being vaccinated
Cues to action	Participants motivated by health care provider recommendation	All the participants reported they would have their child vaccinated if it was recommended by a health care provider
Self-efficacy	Participants confidence in protecting their child	Participants were confident that if they followed health care providers' recommendations, they would be protecting their child

Limitations

This study was limited to Hispanic American parents of male children, aged 11 to 13 years, residing in Weld County, Colorado. Not all Hispanic American parents in Weld County knew about the study or had the opportunity to participate in the study. Results may not be generalizable to a larger population or to Hispanic American parents in other areas. Of the participants, no male parents responded. Male parents may have dissimilar beliefs and attitudes. Additionally, the study was limited to Hispanic American parents who speak English, as the interviews were only conducted in English. Results are not generalizable to Hispanic American parents who only speak Spanish.

The credibility of the current study refers to the validation and correctness of the data acquired from the participants. To address credibility, I acquired information directly from individuals who were knowledgeable of the phenomena of interest to ensure comprehension of the participants' experiences. I remained objective and reported factual data to provide study substantiation. I used member checking to control bias.

This study was limited in the exploration of cost as a factor in vaccination. Cost was not directly addressed in the interviews. None of the participants mentioned cost as a factor in their decision-making process.

Recommendations

Public education and listening to parents' concerns surrounding vaccination are important for vaccine programs to continue to prevent disease (Olpinski, 2012). Yet, there is little research on parents' perceptions of HPV vaccination and almost nothing on

the perceptions of parents of male children. Similarly, there is little research on Hispanic American parents' perceptions surrounding HPV vaccination. The findings of this study contribute to the knowledge base of beliefs and attitudes of Hispanic parents of male children, aged 11 to 13 years regarding HPV vaccination. This includes parental attitudes and beliefs regarding HPV vaccination for their male children, parental vaccination concerns, and factors that contribute to the parental decision-making process regarding the decision to vaccinate or decline HPV vaccination for their male children.

Due to the limitations of this study, a comparative study of Hispanic American parents in other geographical areas as well as comparative studies with Hispanic American parents who are Spanish speaking would provide insight into Hispanic American parents' beliefs and attitudes toward HPV vaccination for their male children. Studies of Hispanic American parents who are new to the United States, or who have lived in the United States for a short period of time would also provide additional insight. Studies with broader recruitment could be done with this population. Additional studies with this population could also be done that include direct exploration of cost as a decision-making factor. Health care providers in Weld County, Colorado should be encouraged to discuss HPV vaccination with Hispanic American parents and recommend the vaccination for their male children when appropriate.

Implications for Social Change

The indication of positive social change connects the ability of research to inspire modification of human behavior and experience for positive change for the betterment of others, the community, and society. Findings from this study can be used to influence

strategies to increase HPV vaccination and thereby lead to positive social change. This would include the implication for health care providers to be educated regarding the need to discuss HPV vaccination with parents of male children and, as appropriate, recommend the vaccination. Strategies for social change should also include health care leadership's involvement in the development of plans for health improvement in their communities. The findings could be used to enhance immunization marketing aimed at Hispanic American parents such as being used by public health agencies to address culturally specific health education aimed at increasing HPV vaccination rates amid male adolescents. The findings could be disseminated to clinics in the area that provide childhood vaccinations. This would create positive change for the individual, the family, and society. At the individual level, primary and secondary disease could be reduced thus improving quality and length of life and reducing health care costs. Unvaccinated individuals may benefit from reduced risk of exposure. If their sexual partners are vaccinated, then they may not be exposed to the virus. The families of protected individuals are spared the emotional and financial burden of disease. The more people who are vaccinated, the less opportunity there is for disease to spread. Less disease equates to decreased cost of disease treatment and lost days of work. This would positively impact society and public health.

Organizational level. The results of the study could be used by health care organizations in the Weld County area. This could include the health district, pediatrician offices, and family health clinics. I can disseminate the findings of this study to health care professionals and organizations through professional conferences, written materials,

and training sessions. This could lead to more health care providers offering information about HPV vaccination and recommendations for male children. As other scholars have found providing vaccination information and the health care provider recommending vaccination assists in increasing vaccination rates (Ylitalo, Lee, & Mehta, 2013; Ventola, 2016). It is relevant and essential to provide education to increase knowledge and self-efficacy meant to create increasing acceptance of vaccination. Additionally, health policies aimed at community health promotion should include education to meet the cultural needs of the area's population. This can be done by incorporating culturally specific approaches into health promotion tools.

Societal level. Findings from this study indicated that an increase in knowledge and recommendation for HPV vaccination would lead to increased HPV vaccination rates; this was supported by Ylitalo, et al. (2013) and Ventola (2016). The health of a nation is dependent on community health which is dependent on individuals within the community acting positively regarding health actions. Community organizations will need to act to advocate for and educate their diverse populations. Education is a key component and strong tool that can transform individuals, communities, and the nation.

Conclusions

It is important to understand the parental beliefs and attitudes surrounding immunization. Based on the data analysis, using the three major themes that developed, I was able to determine that Hispanic American parents who reside in Weld County, Colorado and have male children aged 11- to 13- years-old desire to protect their children from disease/illness and to accomplish this the parents will accept HPV vaccination if it

is recommended by a health care professional. Additionally, most of the parents had no concerns regarding HPV vaccination and those who did have concerns would still vaccinate their child if it was recommended. This information is significant so health care providers can be educated to discuss the vaccination with parents of male children and when appropriate recommend the vaccination. This will be an important measure to assist in attaining the Healthy People 2020 national goal of 80% of adolescent males completing the HPV vaccination series (Office of Disease Prevention and Health Promotion, 2016).

Health disparities exist and vaccination may help reduce some disparities. Hispanic American men and women suffer a disproportionately higher rate of some cancers related to HPV infection than do European American men and women (CDC, 2016a). HPV vaccination can prevent more than 90% of cancers caused by HPV from ever developing (CDC, 2018). It will be important to continue to make attempts to understand what drives parental decision-making processes regarding vaccination for their male children. Findings from this study contributed to the current literature regarding beliefs and attitudes of Hispanic parents regarding HPV vaccination for their male children. The research from this study can be used by public health agencies to address culturally specific health education aimed at increasing HPV vaccination rates amid male adolescents

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Appendix A: Flyer**HISPANIC PARENTS OF SONS AGED 11-13 YEARS OLD, I NEED YOU FOR MY STUDY.**

The study is about the beliefs and attitudes of Hispanic parents of male children regarding the human papillomavirus (HPV) vaccination.



To participate:

You need to be at least 18 years old

Identify as Hispanic or Latino

Be the natural or adoptive parent of a son who is between 11 and 13 years old

Currently live in Weld County Colorado

The study involves a one-time interview lasting approximately 25-40 minutes

The interviews will be conducted in English.

Individuals who qualify and participate in the interview process will receive a \$20 gift card to Target or Walmart.

See additional information on next sheet.

If you are interested or know of anyone, I am happy to answer any questions you may have. Phone or text (xxx-xxx-xxxx) or email at Christy.Wilson@waldenu.edu

Hello. My name is Christy Cordova Wilson and I am a public health doctoral student at Walden University, specializing in community health. My father is a native of Fort Collins and I spent much of my childhood here in northern Colorado. I have recently returned to Colorado and I am interested in working in the community to help improve the well-being and overall health of the Hispanic community.

I am inviting Hispanic parents who have sons ranging in age from 11-13 years old to be part of my research study. My research study is focused on learning about the beliefs and attitudes of Hispanic parents of male children, aged 11 to 13 years regarding human papillomavirus (HPV) vaccination. To participate in the study, you must be at least 18 years old, identify as Hispanic or Latino, be the natural or adoptive parent of at least one male child who is between the ages of 11 and 13 years old and be a current resident of Weld County, Colorado. The study will involve a one-time interview that will last approximately 25 to 40 minutes. The interviews will be held in a private study room at the public library. The interviews will be conducted in English. Individuals who qualify and participate in the interview process will receive a \$20 gift card to Target or Walmart for their time and participation. If you are interested or know of anyone who may be interested, I am happy to answer any questions you may have. You can contact me by phone, text at (000)-000-0000 or email at Christy.Wilson@waldenu.edu

Appendix B: Prescreen Tool Study Criteria

- Are you at least 18 years old?
 - Yes or No
- Do you identify yourself as Hispanic or Latino?
 - Yes or No
- Are you the natural or adoptive parent of at least one male child between 11 and 13 years old?
 - Yes or No
- Do you currently reside in Weld County Colorado?
 - Yes or No

Appendix C: Interview Guide

Question 1: Tell me about your experiences with vaccinations for your child/children.

Question 2: What are your thoughts about vaccinations in general for your son?

Question 3: Describe what helps you to make decisions to accept or decline vaccinations.

Question 4: Who do you trust the most for information on vaccination? The least?

Question 5: What do you know about human papillomavirus or HPV?

Question 6: What do you know about the HPV vaccine?

Question 7: What are your thoughts about human papillomavirus vaccination for males in general?

Question 8: Describe your feelings about human papillomavirus vaccination for your son.

Question 9: How do you feel about the human papillomavirus vaccination requiring three visits with an immunization at each visit to complete the series?

Question 10: Describe how you think most parents like yourself feel about human papillomavirus for their sons.

Question 11: Tell me about any of your children, male or female, who received the human papillomavirus vaccination.

Question 12: Is there anything else you would like to add?

Appendix D: Research Questions and Interview Guide Provided to Experts for Review

RQ 1: What are the attitudes and beliefs of Hispanic parents of male children 11-13 years old regarding HPV vaccination for their male children?

RQ 2: What are the HPV vaccination concerns of Hispanic parents of male children aged 11 to 13 years?

RQ 3: What factors contribute to the decision making process for Hispanic parents of male children age 11-13 years to vaccinate or decline HPV vaccination for their male children?

Interview Guide:

Question 1: Tell me what you know about human papillomavirus.

Question 2: Tell me what you know about human papillomavirus vaccination.

Question 3: What are your thoughts about human papillomavirus vaccination for males in general?

Question 4: How do you feel about the human papillomavirus vaccination requiring three visits with an immunization at each visit to complete the series?

Question 5: Describe how you think most parents like yourself feel about human papillomavirus for their sons.

Question 6: Tell me about any of your children male or female who received the human papillomavirus vaccination.

Question 7: Tell me about your experiences with vaccinations for your child/children.

Question 8: What concerns do you have about vaccinations in general for your son?

Question 9: Describe your feelings about human papillomavirus vaccination for your son.

Question 10: Describe what helps you make decisions to accept or decline vaccinations.

Question 11: Who do you trust the most for information on vaccination? The least?

Question 12: Would the cost of a vaccine prevent you from getting it for your child, even if you felt your child needed it?

Question 13: Do you think transportation or lack of transportation to a clinic would be a factor to get and/or complete the human papillomavirus vaccination series?

Question 14: Describe any events in the past that would encourage or discourage you from getting a vaccine for your child?

Question 15: Have you ever declined a vaccination for your child? If so, explain the reason you choose to decline the vaccine.

Question 16: How likely do you feel you that you will have your son get the first human papillomavirus vaccination? Complete the three dose series?

Question 17: Is there anything else you would like to add?

Comments from experts:

Overall, I like these questions. However, I think you need to decrease the number of questions, limit it to 10 or 12 at the most. They may get tired of answering so many questions.

This is too many questions and a few of them seem redundant. Eliminate some or combine some, I think you can still get the answers you want. Don't ask more than 12 questions. The last question will help you get more information.

Consider asking fewer questions, 17 seems like a lot to ask and I think some of the questions ask almost the same thing. Maybe 10 or 12 questions. I like the last question; it gives them the opportunity to tell you more about their thoughts.