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## Latter-Day Saint Beliefs Informing Parental Perceptions of the HPV Vaccine

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# Walden University

College of Education and Human Sciences

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Natalie Todd

has been found to be complete and satisfactory in all respects,  
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Walden University  
2025

Abstract

Latter-Day Saint Beliefs Informing Parental Perceptions of the HPV Vaccine

by

Natalie Todd

MPH, University of New England, 2018

BA, Whitworth University, 2016

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Education and Promotion

Walden University

January 2025

## Abstract

A variety of factors could influence the use of the human papillomavirus (HPV) vaccine, such as religion. However, the perceptions of Latter-Day Saint (LDS) parents on the HPV vaccine are unknown. Learning about the perceptions of LDS parents could help guide future interventions to help increase vaccine uptake. The purpose of this study was to explore how LDS parents perceive the HPV vaccine severity, benefits, and barriers in the United States, how the beliefs of the LDS religion may influence these views, and the experiences of parents regarding susceptibility to HPV and cues to action to HPV prevention. Using the health belief model framework, key research questions were used to examine LDS parental perceptions about the HPV vaccine and how LDS beliefs contribute to these perceptions, as well as parental experiences with the susceptibility to HPV and cues to action that would encourage HPV vaccination. This was a general qualitative study in which individual interviews were used through emails and Zoom calls. Dedoose was used for coding and bracketing the data and an interpretive phenomenological analysis was used. A majority of participants had favorable views of the HPV vaccine and saw cancer prevention as the main benefit to receiving the vaccine. However, few of the participants had any experience with the vaccine itself. Lastly, most participants stated that their faith did not inform their views on the HPV vaccine. Future studies should look at the statistics on HPV vaccination rate for LDS children, reasons for lack of experience with the HPV vaccine, and the LDS religion's official standing on the HPV vaccine. The findings in this study could help improve the dissemination of information on the HPV vaccine and improved accessibility to the vaccine.

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## Dedication

I want to dedicate this dissertation to my family and committee, as I could not have made it to where I am without their support and guidance. I also want to thank the individuals that participated in this research for taking time out of their days to share their views and perceptions about the HPV vaccine.

## Acknowledgments

I want to thank my parents for always pushing me to keep working, helping me through slumps, giving me advice that I may not have wanted to hear but needed to hear, and supporting me and being my cheerleaders through every step of this dissertation process. I also want to thank my brothers for being sympathetic ears when I needed to talk about issues or problems or bumps in the road that were very frustrating. I would also like to thank my work family as they have also been my cheerleaders through this process, as well as sympathetic ears to hear about issues I may have been having.

I also want to thank my committee for helping me through every step of the dissertation and providing me with feedback to help improve my paper. I want to thank Dr. Tarver for taking the time to review my paper as I worked on it and providing feedback for each chapter before they were turned in officially. I also want to thank Dr. Talbert for stepping in as my second committee member and giving me advice and tips to advance and improve my dissertation.

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## Chapter 1: Introduction to the Study

The human papillomavirus (HPV), a common sexually transmitted infection (STI), infects 13 million individuals, including teens and adults, in the United States each year (Centers for Disease Control and Prevention [CDC], 2024b). In fact, at some point in their lives, almost all men and women have contracted HPV (CDC, 2024b). One way to prevent HPV infection is with the HPV vaccine (CDC, 2024b). However, there are some factors that could prevent individuals from vaccinating their children. One of the factors that influenced vaccine uptake was religion (Franco et al., 2019).

States that identify as highly religious have lower HPV vaccination completion rates and Christian religions, beside Catholics, have negative views of the HPV vaccine or preferred an older age at the time of vaccination (Franco et al., 2019; Shelton et al., 2013). Few studies have focused on the views of the Church of Latter-Day Saints (LDS), and it is unclear what the vaccination rates are within this religion. The information gleaned from the current study is important for developing health education materials targeted at specific religious groups in the hopes of increasing vaccination rates. Additionally, understanding the views of parents within the LDS religion regarding the HPV vaccine could help to address any concerns or misconceptions about the vaccine.

In this chapter I provide a background of the topic of the study, as well as a problem statement and the purpose of this study. The research questions and a discussion on the theoretical framework for this study are provided. This is followed by the nature of the study, definitions of key terms, and assumptions. Finally, the scope and delimitations, limitations, and significance of this study are discussed.

## **Background**

HPV is such a common STI that over 42 million individuals are infected within the United States (CDC, 2024b). This STI is asymptomatic and typically goes away on its own; however, HPV can cause genital warts or cancer if it does not go away (CDC, 2024a). Cancers caused by HPV include cervical, oropharyngeal, anal, penile, vaginal, and vulvar cancer (National Cancer Institute [NCI], 2023). Approximately 90% of cervical and anal cancers are caused by HPV, which was also involved in 60% of penile cancers and 70% of vaginal and vulvar cancers, and 60% to 70% of oropharynx cancers (CDC, 2024d). When HPV does not go away on its own, (e.g., the immune system is unable to take care of the HPV infected cells) HPV infected cells will multiply and create precancerous cells that could lead to the development of cancer (NCI, 2023). However, the development of cancer caused by HPV could take between 10 and 20 years to develop (NCI, 2023). The HPV vaccine is one way to prevent HPV infection, genital warts, and some cancers (e.g., cervical cancer; CDC, 2024c). Despite the protection that the HPV vaccine can provide, only 38.6% of 9-17 year old children in the United States had received one or more doses of the HPV vaccine (Villarroel et al., 2024).

The LDS denomination is a Christian religion that revolves their beliefs around Jesus Christ (LDS, 2021a). One of the core beliefs of the LDS religion is to become more Christ like (LDS, 2021b). Other core beliefs include Jesus Christ is their savior, life has purpose, members are guided by the scriptures, and that God loves them (LDS, 2021b). The LDS church believes in following the Law of Chastity and that the Heavenly Father (God) provided this law to protect individuals (LDS, n.d.). This means that members of

the LDS religion live a chaste life (e.g., no sex before marriage and being morally clean; LDS, n.d.). Due to living this chaste and moral life, some members may not think about the HPV vaccine since they would only be sexually active with one person (Webster, 2008). Some young adults in the LDS religion stated in a Brigham Young University newspaper article that preventing cancer is a major reason for getting the HPV vaccine (Webster, 2008). However, preventing STIs was not a concern as some students believed that contracting STIs did not apply to them (Webster, 2008).

Little is known about parental perceptions of the HPV vaccine or how the LDS religious beliefs influence these perceptions. This study is needed to help guide health education efforts to increase HPV awareness and vaccination rates. Focusing on the LDS religion will help to personalize health education materials for the church.

### **Problem Statement**

A variety of factors could influence vaccine uptake (e.g., age of teens, race/ethnicity, HPV vaccine mandates, and gender), with one such factor being religion or religiosity (Franco et al., 2019). Studies have found that Christian and non-Christian religious values or beliefs (e.g., moral behaviors, such as abstinence or monogamy) and culture have led to perceptions of a low risk of contracting HPV, which has led to the HPV vaccination being declined (Best et al., 2019; Mupandawana & Cross, 2016). Religious females have also been found to be less likely to be vaccinated against HPV and less likely to be informed about HPV and its vaccine (Best et al., 2019; Bodson et al., 2017). Furthermore, HPV vaccine completion rates were lower in states that were more religious and conservative (Franco et al., 2019). In Texas (one of the highly religious and

conservative states), only 32.9% of individuals had completed the HPV vaccine (Franco et al., 2019). Additionally, parents affiliated with Christian religions besides the Catholic and Protestant religions were more likely to be against the HPV vaccine or wanted their children to receive the vaccine at a later age (Shelton et al., 2013). It was not clear what the other Christian religions were as Shelton et al. (2013) did not specify these religions, so it was unclear if the LDS religion was part of the “other Christian religions”.

Compared to other Christian denominations, LDS pharmacists had a less favorable view toward the HPV vaccine (Tolentino et al., 2018).

Though religious values and religiosity were found to reduce HPV vaccine rates, the perceptions of LDS parents on the HPV vaccine and how the LDS beliefs contribute to these perceptions is still unknown. Few studies have focused on the LDS religion, the HPV vaccine rates within these religions, and the particular beliefs that influenced HPV vaccination decisions. Not only do highly religious states have lower HPV vaccination rates, but religious females have lower HPV vaccine rates and HPV knowledge (Bodson et al., 2017; Franco et al., 2019). Additionally, there is a need for qualitative research that explores HPV vaccination decision experiences and the role of specific religious beliefs (Best et al., 2019; Bodson et al., 2017). Addressing the stated gap would provide additional knowledge to the health education and promotion field by bringing to light the experiences of LDS parents regarding the HPV vaccine. This is significant for the health education and promotion profession, as religiosity and spirituality play an essential role in a parent’s attitude towards the HPV vaccine and vaccinating their child against HPV (Thomas et al., 2015). I used the health belief model (HBM) to guide this study (see

Rosenstock, 1974). The HBM can be used to determine how religious beliefs influence parental perceptions about the HPV vaccine and their decision to vaccinate their child or children.

### **Purpose of the Study**

Vaccination rates for HPV in religious U.S. states and among religious females are low, yet few studies have focused on specific religions and how the beliefs in those religions may influence HPV vaccine decisions (Bodson et al., 2017; Franco et al., 2019). The purpose of this general qualitative study was to explore how LDS parents perceived the HPV vaccine severity, benefits, and barriers in the United States, and how the beliefs of the LDS religion may influence these views. I also explored the experiences of parents regarding susceptibility to HPV and cues to action to HPV prevention.

### **Research Questions**

RQ1: What are the Latter-Day Saint parental perceptions of the human papillomavirus vaccine and how do Latter-Day Saint beliefs contribute to these perceptions?

RQ2: What are the experiences of parents regarding the susceptibility to human papillomavirus and what cues to action would encourage human papillomavirus prevention?

### **Theoretical and/or Conceptual Framework for the Study**

The framework for this study was based on the HBM. The HBM is concerned with how personal beliefs or perceptions influence health behaviors and how these beliefs can be influenced by factors such as culture or religion (Hayden, 2019; Rosenstock,



1974). The perceptions and experiences of parents regarding HPV and the HPV vaccine and how religion influences these perceptions was explored in this study. Some concepts that were explored were the parental perceptions of the severity of and susceptibility to HPV, how religious beliefs influence perceptions, and the perceived barriers and benefits of the HPV vaccine. These concepts aligned with the constructs (e.g., perceived susceptibility, severity, and barriers) and concepts (e.g., health behaviors are based on personal perceptions) of the HBM (Rosenstock, 1974). Lastly, past research has used the HBM to form inquiries to determine HPV vaccine views and acceptability, similar to what was explored in the current study (Grace-Leitch & Shneyderman, 2016).

### **Nature of the Study**

The nature of this study was qualitative with a basic qualitative approach. This approach aligned well with the problem statement of this study. The basic qualitative approach allowed for in-depth information to be gathered about the perspectives, experiences, and views of parents regarding HPV, the HPV vaccine, and the influence of religious beliefs, which was the aim of this study. Gathering in-depth perspectives regarding the HPV vaccine and the role of religious belief in vaccination decisions also addressed the gap identified in the problem statement.

The qualitative data on parental perspectives regarding HPV, its vaccine, and the influence of religious beliefs was collected by recruiting parents with children between the ages of 9 and 17 years old, who were active members (e.g., attend church three to four times a month) of the LDS religion, and lived in the United States to participate in this study. Recruitment of the LDS parents took place online and in-person (e.g., flyers

on community boards). If prospective parents met the criteria for participation in the study, individual interviews were scheduled. Individual interviews were conducted through email and through video conference (e.g., Zoom). Video conference interviews were audio recorded and notes were taken based on observations. These interviews were then transcribed verbatim.

Interviews were analyzed using the program Dedoose (2021). Analyses were conducted using an interpretative phenomenological analysis (IPA). As part of the IPA, I used bracketing to code the data, along with In Vivo coding. Bracketing means that key phrases from each interview related to the phenomenon under study were located (Patton, 2015). Following bracketing, categories and themes were developed.

### **Definitions**

*LDS*: LDS stands for Latter-Day Saints. These are individuals that are part of the Church of Jesus Christ of Latter-Day Saints (LDS, 2021a).

*Religiosity*: Traditional behaviors and practices associated with a religious institution (Thomas et al., 2015; Villani et al., 2019).

*Sexuality*: A broad term that can encompass an individual's gender identity and role, sex, intimacy, sexual orientation, and pleasure (World Health Organization [WHO], 2015).

*Spirituality*: The desire to discover the meaning of life, the desire for introspection, and to connect with humanity (Villani et al., 2019). Spirituality can be experienced within or outside of a religion (Villani et al., 2019).

*Ward*: A congregation of members of the LDS religion that is based on location (LDS, 2021c).

### **Assumptions**

This was a qualitative study and as such all information was gained from in-depth conversations with individuals. Therefore, I assumed that individuals were providing truthful information and were answering interview questions honestly. The target population for this study was active LDS parents with children within the HPV vaccination age range (9-17 years old). The assumption here was that participants were active LDS members (e.g., attended church regularly) with children 9-17 years old.

### **Scope and Delimitations**

I focused on the LDS religion, LDS parental perceptions about the HPV vaccination, and the contribution of the LDS beliefs on these perceptions, as these were topics that are still unknown. The population included in this study were parents of children ages 9 to 17 years old who were active members of the LDS church and resided in the United States. Individuals that did not have children 9 to 17 years old, were not active in the LDS church, or resided outside of the United States were excluded from this study. Despite the specific population for this study, transferability was met with maximum variation within the population. For example, interviewing parents from a variety of places within the United States, that had children of various ages, helped ensure the population was diversified.

I used HBM in this study. HBM has six constructs: perceived susceptibility, perceived severity, perceived barriers, perceived benefits, cues to action, and self-efficacy

(Hayden, 2019). All of these constructs were used within the study, except self-efficacy. Self-efficacy is an individual's belief that they would be able to complete a behavior (Jones et al., 2015). This study was about what LDS parents think of the HPV vaccine and the influence their religion may have on their views and not on whether they have the ability to access or complete the HPV vaccine. So, I determined that self-efficacy was not needed for this current study.

### **Limitations**

A potential limitation of this study was the target population. The target population was very specific for this study (e.g., LDS parents with children ages 9 to 17 years old), which could mean the findings of this study may not represent other populations. Another limitation is that this study allowed for interviews to be conducted in-person, through video conferences, over the phone, or through email. This inconsistency led to some interviews having more observations than others. Visual observations were impossible to witness when conducting an email interview. Another limitation of this study was that I planned to transcribe the interviews myself. Manual transcribing is time consuming and can take quite a bit of time to complete. The limitation of a lack of visual observations was addressed by offering a video conference (e.g., Zoom) as an interview option. The lengthiness of manually transcribing the interviews was addressed by using a transcription program.

There were some potential biases that could have influenced the outcome of the study. I am a member of the LDS religion, so there was potential for personal bias. To address this bias, I had the transcripts and analyses reviewed by the dissertation chair.

Lastly, I only recruited participants with whom I had no personal affiliation (e.g., had never met).

### **Significance**

The research in this study will fill a gap in understanding by focusing on the LDS religion and how the beliefs of this religion may influence the HPV vaccine decisions of parents. This was an area of research that few studies had explored. Best et al. (2019) mentioned that future research should focus on gaining an in-depth understanding of HPV vaccine decisions and how religious beliefs may influence these decisions. The findings of this study provided insight into LDS parental views about the HPV vaccine and how they believe their religion influences these beliefs. This information could aid future health education and promotion campaigns tailored towards specific religions to help increase HPV vaccinations.

These findings can also lead to positive social change. With the knowledge gained from this research, interventions can be developed to address specific concerns (especially religious matters), correct misconceptions, and provide accurate information to parents in the hopes of increasing HPV vaccination rates. The HPV vaccine prevents cervical precancers, HPV infection, and genital warts (CDC, 2024c). Creating more effective, tailored interventions to increase vaccination rates among religious individuals and help prevent future infections could be beneficial.

### **Summary**

In the United States, millions of individuals are affected by HPV. Although HPV can go away on its own, if it does not, it can lead to the development of cancer or genital

warts (CDC, 2024a). The HPV vaccine is one way to protect against HPV and cervical cancer (CDC, 2024c). There are a variety of factors that can affect HPV vaccination rates, including religion. Religious females are less likely to be vaccinated against HPV (Best et al., 2019; Bodson et al., 2017). However, it is unknown what the perceptions of LDS parents are regarding the HPV vaccine and how LDS beliefs contribute to these perceptions. Therefore, the aim of this study was to explore how LDS parents perceived the HPV vaccine. In Chapter 2, I provide a review of scholarly literature related to the key variables of this study. I also review the literature search strategy and provide a discussion on the theoretical foundation used in this study.

## Chapter 2: Literature Review

Religion can play a crucial role in the decisions that individuals make, including their health decisions. Researchers have found that religion and religious leaders can influence health decisions and overall health in parents and other individuals (Clark et al., 2018; de Diego Cordero & Badanta Romero, 2017; Malcolm et al., 2019). One such health issue is HPV. Researchers found that religious individuals are less likely to receive the HPV vaccine, more likely to be against the HPV vaccine, and have lower HPV vaccination rates (Best et al., 2019; Bodson et al., 2017; Franco et al., 2019; Shelton et al., 2013). However, there have been few studies that focus on a specific religion or religious belief, specifically the LDS religion, and how the beliefs in that religion influence HPV vaccine decisions in parents. Furthermore, few studies have focused on the LDS religion and how the beliefs of this religion influence parental perceptions about the HPV vaccine.

Parents play a crucial role in their child's health decisions and health care. Deciding factors for a parent to vaccinate their child against HPV tend to be the benefits that the vaccine provides (i.e., protection against cancer, HPV, and genital warts) and recommendations from a healthcare provider (Galbraith et al., 2019; Krawczyk et al., 2015; Ogunbajo et al., 2016; Radisic et al., 2017; Walker et al., 2020). However, a lack of knowledge or awareness about the HPV vaccine, a fear of side effects, and fear of the unknown lead parents to reject the HPV vaccine (Galbraith et al., 2019; Krawczyk et al., 2015; Lee et al., 2018; Marshall et al., 2019; Mupandawana & Cross, 2016; Myhre et al., 2020; Radisic et al., 2017; Sherman & Nailer, 2018).

Most studies focused on the benefits and barriers to parents vaccinating their children against HPV. However, few have focused on how specific religions, such as the LDS religion, influence the HPV vaccination decisions made by parents affiliated with that religion. One study mentioned the health benefits of following the doctrine of the LDS religion and how moving away from this doctrine and the habits formed from it can be detrimental to health (de Diego Cordero & Badanta Romero, 2017). However, the HPV vaccine or parental perceptions were not mentioned in the study. So, the purpose of this study is to explore how parents affiliated with the LDS religion perceive the HPV vaccine and how parental views are influenced by the beliefs of the LDS religion.

In this chapter, I review the theoretical foundation for this study and the literature, which is divided into two sections. The first section provides an overview of the HPV vaccine, the factors influencing vaccination, and the relation between parents and the vaccine. The second section is focused religion and health and religion and the HPV vaccine.

### **Literature Search Strategy**

A search of Google Scholar and the Walden Library, within the Health Science subject area, was conducted for this literature review. Key search terms used for searching for literature were *HPV or HPV vaccine AND religious beliefs or religion or spirituality AND parents or guardians or mother or father or parent; parental perspectives AND HPV or HPV vaccine or human papillomavirus and religion or religious beliefs; health belief model or HBM AND HPV or HPV vaccine or human papillomavirus; religion's influence on health or religious influence on health; factors*



*influencing HPV vaccine; knowledge or beliefs AND HPV or HPV vaccine or human papillomavirus; and LDS religion or latter-day saint religion or LDS AND sex or sexuality AND health or health decisions.* The literature search using the Walden Library, within the Health Science subject area, was able to search for literature within all the databases. Only articles published within the last 5 years were used for this literature review. However, a few older articles were used in instances where there was little current literature. For instance, there were few articles that addressed the LDS religion and the HPV vaccine or HPV awareness, so articles older than 5 years were included. The articles were all peer-reviewed and full text.

### **Theoretical Foundation**

The theoretical foundation of this study was the HBM, which was developed by social psychologists in the 1950s (Hochbaum, 1958; Rosenstock, 1960; Skinner et al., 2015). The constructs that make up the HBM are based on the cognitive theory, which posits that behaviors are based on the values and expectations that individuals place on the outcomes of a behavior and the actual behavior (Skinner et al., 2015). The HBM was originally created to address concerns regarding the low screening rates for tuberculosis but was further developed later to address other health issues (Finfgeld et al., 2003). There are six constructs that make up the HBM. These constructs include perceived barriers, perceived benefits, perceived severity, perceived susceptibility, self-efficacy, and cues to actions (Hayden, 2019).

Perceived barriers are powerful predictors of health behaviors (Jones et al., 2015). When individuals believe that there is a negative consequence to a health behavior or

action it is considered a perceived barrier (Jones et al., 2015). Perceived barriers can also be considered obstacles that prevent an individual from engaging in a behavior (Skinner et al., 2015). These obstacles could include fear, costs, or inconvenience (Finfgeld et al., 2003; Jones et al., 2015; Skinner et al., 2015). Perceived benefits are effective predictors of health behaviors (Jones et al., 2015). These perceptions are the positive beliefs or advantages about a health behavior or action (Skinner et al., 2015). The perceived benefits need to be greater than the barriers for an individual to engage in a health behavior (Finfgeld et al., 2003). Perceived benefits can be both health benefits and nonhealth benefits. For instance, health benefits could consist of controlling a disease by consistently taking medications, exercising, or healthy eating. Nonhealth benefits could consist of saving money or pleasing a family member or friend (Skinner et al., 2015).

The next construct of the HBM is perceived severity. This is the perception of possible consequences of not engaging in a healthy behavior or continuing with an unhealthy behavior (Finfgeld et al., 2003). Consequences can consist of pain, death, disability, stigmatization, poor relationship with family, or being unable to work (Skinner et al., 2015). Out of the six constructs, perceived severity is the least powerful construct of the HBM (Jones et al., 2015). Health behaviors can also be predicted with perceived susceptibility. This construct consists of the belief an individual has on how likely they are to contract a disease (Skinner et al., 2015). For example, an individual may believe they are more at risk of getting breast cancer if they have a family history of breast cancer.

The last two constructs of the HBM are cues to action and self-efficacy. Cues to action are factors that prompt an individual to act and adopt or change a behavior (Skinner et al., 2015). These factors could consist of experiencing a symptom of a disease, physician recommendation, the media, or a family member being diagnosed with an illness (Skinner et al., 2015). Finally, self-efficacy is an individual's belief that they can perform a health behavior (Skinner et al., 2015). Individuals need to perceive that they can execute a behavior in order to engage in that behavior. For instance, an individual would need to believe they can quit smoking, start walking for 30 minutes, three times a week, or make healthier meal choices. Self-efficacy was not applied in this study.

### **Application of the HBM**

The HBM has been used in the past to address the HPV vaccine and the beliefs of individuals (parents and college students) considering the HPV vaccine. Some of these studies used the HBM within questionnaires or surveys addressing the constructs on the HBM. Grace-Leitch and Shneyderman (2016) used a survey that included the constructs perceived susceptibility and self-efficacy to determine if they were linked with vaccine acceptability in college students. The constructs perceived severity, risk, and benefits were also incorporated into another survey where Christy et al. (2016) worked to determine if these constructs were associated with an individual's regret of not receiving the HPV vaccine after developing an HPV related illness (e.g., cancer or genital warts).

The previous two studies were quantitative, but the HBM has also been used in qualitative studies. In some qualitative studies the HBM is used as a guide. To determine

African American parents' health beliefs about the HPV vaccine, Galbraith et al. (2019) used the HBM to guide their interview questions and for the analysis of their data. There was found to be low perceived susceptibility of contracting HPV, with protection against cancer and genital warts being seen as the benefits of the HPV vaccine (Galbraith et al., 2019). Concerns about the unknown factors of the HPV vaccine (e.g., effectiveness and side-effects) and the politicizing of the vaccine were considered barriers to the vaccine (Galbraith et al., 2019). The incorporation of the constructs of the HBM into surveys and as a guide for interview questions would be similar to the current study. I used HBM to guide the interview questions and incorporated it into the questions being asked.

### **Rationale for Choosing HBM**

The HBM is a widely used framework when developing health behavior interventions and explaining changes in health behavior (Skinner et al., 2015). This framework has also been used to study the beliefs about vaccinations and the perceptions of the individuals about the vaccinations (Walker et al., 2020). The HBM has also been used to address the HPV vaccine and the perceptions of parents about the vaccine (Galbraith et al., 2019; Radisic et al., 2017; Walker et al., 2020). This was one of my goals. I aimed to determine LDS parental perceptions regarding the HPV vaccine and the influence the LDS religion may have on these perceptions. Determining the perceptions of an individual regarding a health behavior is one of the main purposes of the HBM, therefore it was chosen for the current study.

The research questions for the current study involve the perceptions of parents regarding the HPV vaccine. The HBM has constructs that can help determine why

individuals engage or do not engage in behaviors (Skinner et al., 2015). I used the research questions to try and determine why individuals do or do not engage in a certain behavior (e.g., receiving the HPV vaccine). This is directly related to the constructs and purpose of the HBM.

### **Literature Review Related to Key Variables and/or Concepts**

#### **Human Papillomavirus and Vaccine**

In the United States, the most common STI is HPV (Lund & Jensen-Bender, 2019). Over 42 million individuals have HPV, and 13 million individuals are infected every year in the United States (CDC, 2024b). HPV infections are most common in individuals ages 15 to 24 years old (Lund & Jensen-Bender, 2019). Individuals infected with HPV may be unaware of the infection due to the asymptomatic nature of the disease (Foster et al., 2020). However, if symptoms do occur, they appear in the form of warts (genital, common, and plantar) or cancer (cervical, anal, penile, or vaginal; Mayo Clinic, 2021; MedlinePlus, 2024). Individuals can contract HPV through sexual contact, such as oral, vaginal, or anal intercourse (CDC, 2024a). As of 2019, 120 strains of HPV have been identified, 30 to 40 of which are linked to the genital tract (CDC, 2024d; Lund & Jensen-Bender, 2019).

The HPV vaccine was designed to help prevent the contraction of HPV and cancer (e.g., cervical cancer; CDC, 2024a). There are currently three HPV vaccines licensed by the U.S. Food and Drug Administration (FDA), Gardasil® 9, Gardasil®, and Cervarix® (CDC, 2024c; Lund & Jensen-Bender, 2019; McBride & Singh, 2018). However, only one vaccine, Gardasil® 9, is distributed in the United States (CDC,

2024c; Lund & Jensen-Bender, 2019). All three vaccines contain HPV Types 16 and 18, but Gardasil® 9 also contains Types 6, 11, 31, 33, 45, 52, and 58 (CDC, 2024c; Lund & Jensen-Bender, 2019). This vaccine helps to prevent 85% of cervical cancers caused by HPV and has few adverse reactions (Lund & Jensen-Bender, 2019). There are different dose amounts for the HPV vaccine depending on the individual's age. Adolescents ages 11 to 12 years old receive two doses, while adolescents ages 15 years old and older must receive three doses (CDC, 2024c; Lund & Jensen-Bender, 2019). Despite the positives of the HPV vaccine, only 43% of adolescents have completed the HPV vaccine series, 60% have received at least one dose of the vaccine, and only 60% of parents choose to vaccinate their children (Alafifi et al., 2019). In the following two sections, the factors that influence HPV vaccinations and parental perspectives on the HPV vaccine will be covered.

### ***Factors Influencing HPV Vaccinations***

**Provider Recommendations.** The decision to vaccinate against HPV can be influenced by a variety of factors. One such factor is recommendations from a healthcare provider. While a strong recommendation by a healthcare provider led to HPV vaccinations, a lack of a provider recommendation was a barrier to vaccine initiation (Myhre et al., 2020; Sisson & Wilkinson, 2019; Vu et al., 2019; Warner et al., 2017 ). Much of the information gleaned about the HPV vaccine came from healthcare providers and vaccinating a child at the recommended age was also dependent on the provider's recommendation (Dela Cruz et al., 2017).

**Knowledge or Lack of Knowledge.** Knowledge or a lack of knowledge and awareness are also factors in the decision to vaccinate against HPV. Being knowledgeable about the HPV vaccine was thought to positively influence the decision to vaccinate (Fernandez-Pineda et al., 2020). Additionally, awareness of HPV led to parents vaccinating their children, while a lack of awareness resulted in no vaccination (Fernandez-Pineda et al., 2020). Misinformation about the HPV vaccine and HPV itself can lead parents to not vaccinate their children, especially boys (Auslander et al., 2019; Warner et al., 2017). A lack of knowledge about, and having never heard of the HPV vaccine, was also indicated as a reason for not vaccinating a child (Rodriguez et al., 2020; Thompson et al., 2017). A lack of knowledge from peers was also detrimental to vaccine views. Peers with a lack of knowledge increased fear of the vaccine in their friends towards the HPV vaccine (Sisson & Wilkinson, 2019).

**Vaccine Concerns.** Vaccine initiation was also influenced by safety concerns about the HPV vaccine (Rodriguez et al., 2020). Concerns about the safety of the vaccine and potential side effects led to parents deciding not to vaccinate their children (Sisson & Wilkinson, 2019; Thompson et al., 2017). In addition to vaccine safety, parents also had concerns about the effectiveness of the vaccine (Kim & LeClaire, 2019). Similarly, parents that vaccinated their children tended to have a lower concern about the side effects of the HPV vaccine, while parents that did not vaccinate their children had a higher concern about side effects (Myhre et al., 2020).

**STIs, Promiscuity, and a Lack of Sexual Activity.** STI concerns, promiscuity concerns, and a lack of sexual activity are other factors that influence HPV vaccination

decisions. Promiscuity and STIs concerns kept individuals from receiving the HPV vaccine (Dela Cruz, et al., 2017; Kim & LeClaire, 2019; Warner et al., 2017). Concerns about promiscuity or having sex has both encouraged and discouraged vaccination. Some parents felt that, as a teenager, their child may be more likely to engage in sexual activity, so they were willing to vaccinate their child (Dela Cruz et al., 2017). However, mothers that immigrated from other countries (Cambodia and Haiti) associated promiscuity with the HPV vaccine and felt that their daughters would be more likely to become sexually active if they received the vaccine (Kim & LeClaire, 2019). A lack of sexual activity also influenced the HPV vaccine uptake. If a child was not sexually active parents felt that they did not need to vaccinate (Dela Cruz et al., 2017; Rodriguez et al., 2020; Thompson et al., 2017). A lack of sexual activity was also a reason to not vaccinate among men and women ages 18 to 25 years old (Vu et al., 2019).

**Religiosity.** Religiosity was another factor influencing HPV vaccinations. In the United States, more conservative and religious states tend to have lower coverage of the HPV vaccine than less conservative and religious states (Franco et al., 2019). Based on denomination, Catholic individuals were more likely to have vaccinated their daughters, while protestants would rather not vaccinate, and individuals from other denominations preferred that their children be older when they receive the vaccine (Shelton et al., 2013). However, attendance also played a role. Individuals that attended church regularly were more likely to be in favor of no vaccinations compared to individuals that did not attend regularly (Shelton et al., 2013). It was even believed that churches would be against



discussing the HPV vaccine due to the belief that it would encourage sexual activity (Fernandez-Pineda et al., 2020).

**Perceptions.** Perceptions about the HPV vaccine are also factors in the acceptance of the vaccine. Perceptions about the risk of acquiring HPV influenced the acceptance of the HPV vaccine. Parents believed that they would not have much control over the actions of their children once they were older, and so their children would have more chances or increased risk of becoming infected with HPV (Fernandez-Pineda et al., 2020). Also, individuals that were vaccinated against HPV had a higher risk perception of cancers caused by HPV, while nonvaccinated individuals had a higher risk perception of vaccine side-effects (Myhre et al., 2020). The perceived seriousness of HPV also has some influence on vaccine acceptance. Individuals that had higher perceptions of the seriousness of HPV were more likely to initiate the HPV vaccine (Vu et al., 2019). Higher perceptions of the effectiveness of the HPV vaccine also led to the initiation of the HPV vaccine, especially among females (Rodriguez et al., 2020; Vu et al., 2019). This information supports the need for more research into the perceptions about HPV and what influences these perceptions.

### ***Correlates of the HPV Vaccine***

**Age and Race/Ethnicity.** Age and race/ethnicity were found to be correlates of HPV vaccination. Vaccination tended to occur in older adolescents and younger parents (Bodson et al., 2017; Kim & LeClaire, 2019). Adolescents with parents ages 35 to 44 years old and 45 years old and older were less likely to receive at least one dose of the HPV vaccine and were less likely to complete the vaccination series for their child (Lai et

al., 2016). However, women completing the HPV vaccination series for themselves tended to be older and men tended to be younger (Vu et al., 2019). Race/ethnicity also appear to be a correlate in HPV vaccination. In the Idaho and Utah regions, Non-Hispanic White individuals were more likely to initiate the HPV vaccine, while in the Arizona, Nevada, and New Mexico regions Hispanic individuals were more likely to complete the series (Bodson et al., 2017). In fact, Hispanics were more likely to have intentions to vaccinate their daughters than Whites (Cheruvu et al., 2017).

**Education Level.** The education level obtained was a correlate in whether vaccination occurred. Receiving higher education was associated with receiving the HPV vaccine (Kim & LeClaire, 2019; Vu et al., 2019). However, a lower education was also associated with the initiation of the HPV vaccine (Bodson et al., 2017). In fact, women with a college education tended to have no intention of vaccinating their children against HPV (Cheruvu et al., 2017). Marital status is another correlate of HPV vaccination. In Idaho and Utah individuals with married parents tended to be less likely to initiate and complete the HPV vaccine series compared to individuals with unmarried parents (Bodson et al., 2017).

**Socioeconomic Status and Culture.** Socio-economic status and culture were two other correlates of the HPV vaccine. The initiation and completion of the HPV vaccine series is related to the poverty status of individuals (Bodson et al., 2017). In fact, individuals with a higher income were more likely to have no-intent to vaccinate their children against HPV (Cheruvu et al., 2017). Culture is also associated with HPV acceptance. Individuals within the Hispanic culture believe that the HPV vaccine is taboo

due to the belief that it can lead to sexual activity in adolescents (Fernandez-Pineda et al., 2020). However, parents in this culture are becoming more open minded about the vaccine (Fernandez-Pineda et al., 2020). Additionally, in the Haitian culture social norms and values regarding sexual activity made it less likely that Haitian parents would vaccinate their children against HPV (Kim et al., 2019). Though acculturation into American society increased the likelihood of Hispanic individuals vaccinating their children against HPV (Kim et al., 2019).

### ***Parents and the HPV Vaccine***

**Parental Knowledge.** Parents play a major role in their child's health decisions, including whether their child receives the HPV vaccine. A parent's decision to vaccinate their child against HPV depends on a variety of factors. A parent's knowledge about and awareness of HPV and its vaccine could determine if their children were vaccinated or not. In the United Kingdom, parents with daughters were more likely to have knowledge about HPV and its vaccine compared to parents with sons only (Sherman & Nailer, 2018). However, parents with sons that did have greater amounts of knowledge about HPV and its vaccine were more likely to vaccinate their sons (Sherman & Nailer, 2018). In England, Black parents tended to have lower awareness about HPV, especially fathers, which resulted in low acceptability of the HPV vaccine (Mupandawana & Cross, 2016). This is similar in the United States. Parents that had low knowledge and awareness about HPV and its vaccine were less likely to accept the vaccine, but increased awareness led to vaccine acceptance (Lacombe-Duncan et al., 2018; Radisic et al., 2017). Limited knowledge also keeps parents from making informed health decisions about the vaccine

and this limited knowledge could also be due to poor health literacy (Marshall et al., 2019).

**Barriers to Vaccination.** There are also different barriers to accepting and receiving the HPV vaccine. Among African Americans, a lack of a recommendation from a health care provider, believing the vaccine is not needed, religion, and doubts about the effectiveness of the vaccine were all barriers to receiving the HPV vaccine (Galbraith et al., 2016; Galbraith et al., 2019). African Americans and Latinos both had concerns about the initiation of sexual intercourse due to the vaccine, the safety of the vaccine, and believed their child had a low risk of getting HPV (Galbraith et al., 2016). Parents in Canada expressed similar barriers to initiating the HPV vaccine. Canadian parents expressed concerns about the effectiveness and safety of the vaccine, how long the vaccine would last, long-term side effects of the vaccine, a lack of information, and a lack of trust in pharmaceutical companies (Krawczyk et al., 2015). Concerns or fears about the side effects (e.g., infertility or paralysis) and safety of the HPV vaccine appear to be common barriers to parents initiating the HPV vaccine for their children (Marshall et al., 2019; Radisic et al., 2017). Though concerns about costs, their child engaging in risky behaviors, and a lack of health insurance were also barriers to parents initiating the HPV vaccine for their children (Marshall et al., 2019; Radisic et al., 2017).

**Benefits to Vaccination.** Perceived benefits to receiving the HPV vaccine could also influence a parent's decision to vaccinate. One of the common benefits perceived by parents in receiving the HPV vaccine is that it can prevent cancer and genital warts (Galbraith et al., 2019; Krawczyk et al., 2015; Lacombe-Duncan et al., 2018;

Mupandawana & Cross, 2016; Ogunbajo et al., 2016; Radisic et al., 2017). General health protection was another benefit of the HPV vaccine perceived by parents (Krawczyk et al., 2015). Parents also believed another benefit of the HPV vaccine was that it could protect the future partner of their child (Radisic et al., 2017).

**Perceived Risk.** A parent's perception of how at risk their child is to become infected with HPV could influence their decision to vaccinate. Parents in favor of the HPV vaccine believed their child was either engaging or about to engage in sexual activities putting them at risk for HPV, had a higher risk of cancers related to HPV, or had a higher risk of contracting HPV (Marshall et al., 2019; Myhre et al., 2020; Radisic et al., 2017). Parents opposed to vaccinating their children perceived that their children were not at risk of contracting HPV and were more at risk of the side-effects of the vaccine (Marshall et al., 2019; Myhre et al., 2020; Radisic et al., 2017). Parents believed that their child's upbringing (religious and cultural), young age, and sexual education could prevent the initiation of sex in their child, therefore preventing the contraction of HPV (Marshall et al., 2019). For parents with sons that chose not to vaccinate, it was believed that the risk or seriousness of HPV was lower for males than females (Radisic et al., 2017).

**Perceived Susceptibility.** A parent's perceived susceptibility also influences their views and decisions regarding the HPV vaccine. Some parents believed that their children or child had a low susceptibility to becoming infected with HPV, which led parents to refuse the HPV vaccine for their child or children (Galbraith-Gyan et al., 2019; Krawczyk et al., 2015). This was mainly due to the belief that their child was not sexually

active and that the child's moral values regarding abstinence would help to protect their child against HPV (Galbraith-Gyan et al., 2019; Krawczyk et al., 2015). For Canadian parents a high perception of susceptibility led to parents being less likely to be a non-vaccinator (Shapiro et al., 2018).

**Sexual Intercourse Concerns.** Sexual intercourse was another factor that could influence parental decisions about the HPV vaccine. The belief that their child may become sexually active has led parents to initiate the HPV vaccine for their child (Lacombe-Duncan et al., 2018). However, some parents believed that their child was not sexually active and therefore did not require the vaccine (Lacombe-Duncan et al., 2018; O'Leary et al., 2018). There are also parents that believe that by receiving the HPV vaccine, their child will be more likely to engage in sexual activity, become promiscuous, or have unprotected sex, making the HPV vaccine less appealing to parents (Mupandawana & Cross, 2016 [England]; Radisic et al., 2017; Waller et al., 2020 [England]). Parents play an important and influential role in the decision to vaccinate a child against HPV. A variety of factors influence the views, beliefs, and perceptions of parents regarding HPV and the HPV vaccine. However, few studies have been conducted on how religion or a specific religion influenced these beliefs and perceptions. Due to this information, it is important to conduct further research into the perceptions of parents about the HPV vaccine, focusing more on a religion or religious beliefs and its influence on HPV perceptions.

### ***Religion and Health***

**Religion and Health Decisions.** Religion can have an impact on the health and health decisions that individuals make. One aspect of religion that guides health decisions is the involvement of God. Some parents and other individuals believed that God was in control of their health decisions (Malcolm et al., 2019; Superdock et al., 2018; Thomas et al., 2015). The belief that God controlled their health decisions led parents to make decisions about their child's health, however the belief that God should be the one to make their health decisions influenced parents not to make any decisions (Superdock et al., 2018). Many parents felt that control over their child's health should be placed in God's hands (e.g., if God wants a child to get better then they will and vice versa; Superdock et al., 2018). Other individuals have discussed how decisions regarding their health were up to God or were up to God's will (Malcolm et al., 2019).

An individual's spirituality, belief, or faith can also have an impact on health decisions. When it came to making decisions about a child's health, faith helped parents feel confident in the decisions they made, helped with making decisions with their spouse, and helped prevent feelings of regret (Superdock et al., 2018). Decisions could also be guided by beliefs in being reunited with God in the afterlife, beliefs in the afterlife, and that death would alleviate suffering (Malcolm et al., 2019). Some individuals also believed that God worked through healthcare providers or other medical personnel (Malcolm et al., 2019). Lastly, spirituality was seen to have a positive influence on health and contribute to protective health outcomes (Thomas et al., 2015).

Religious leaders and the influence of church members may also play a part in health decisions. When making health decisions, individuals spoke about how religious leaders or authority figures provided counsel helping guide decision making (Malcolm et al., 2019). However, some parents only saw religious leaders as a support system (emotional and spiritual) and that they did not directly influence their health decisions (Superdock et al., 2018). Church members also influence health decisions. Utilizing semi-structured interviews and an interview guide Malcolm et al. (2019) had individuals state that their health decisions were guided by the counsel of group prayer and their places of worship. Church members were also viewed as extended family members and as having an influence on health decisions or beliefs (Thomas et al., 2015). Church attendance was also seen to be influential in health decisions. Parents that attended church regularly were more likely to refuse vaccines (Krok-Schoen et al., 2018).

**Religion and the HPV Vaccine.** Religion can also have an impact on the beliefs, views, and decisions about the HPV vaccine. For instance, the level of religiousness influences HPV vaccine views and decisions. Individuals that had a higher religious commitment or religiousness were less likely to vaccinate against HPV (Birmingham et al., 2019; Franco et al., 2019; Vatopoulou et al., 2019). Highly religious states tended to have lower HPV vaccination rates (Franco et al., 2019). Additionally, individuals with a high level of religious commitment were less likely to get the HPV vaccine compared to individuals with a lower level of religious commitment (Birmingham et al., 2019).

An individual's denomination was also a correlate in HPV vaccination decisions. In their qualitative study, Thomas et al. (2015) found that individuals that affiliated with



the Baptist religion had high rates of HPV vaccinations. When comparing denominations, Catholic parents were more likely to have vaccinated their children against HPV, Protestant parents preferred that no one be vaccinated against HPV, and parents of other Christian faiths preferred that their children be vaccinated at an older age (Shelton et al., 2013). Lastly, pharmacists affiliated with other Christian faiths tended to have more positive views of the HPV vaccine than those that were members of the LDS religion (Tolentino et al., 2018). Specific denominations are key variables in the current study. However, few studies discussed the LDS religion specifically, warranting further research into this specific denomination and how its beliefs influence HPV vaccine decisions.

Beliefs about sexual activity within a religion can also affect HPV vaccination initiation and views. Some church teachings emphasize the need to remain abstinent until marriage, which prevents the discussion of topics such as HPV and its vaccine in church settings (Fernandez-Pineda et al., 2020; Lahijani et al., 2021). Parents believed that churches would be against discussing the HPV vaccine as it was thought that such a discussion would encourage sexual intercourse (Fernandez-Pineda et al., 2020). Sexual activity has also been found to facilitate the relationship between the HPV vaccine and religion (Best et al., 2019). For instance, religious individuals may be more likely to remain abstinent until marriage, which lowers their perception of their risk of getting HPV, leading to the belief that the HPV vaccine is not necessary (Best et al., 2019).

Finally, practicing religion also impacts HPV vaccine decisions and views. Individuals that practiced religion were less likely to have received the HPV vaccine or to have received a recommendation from their healthcare provider for the HPV vaccine

(Bodson et al., 2017). Additionally, parents that attend church or religious services regularly were more likely to be against the HPV vaccine than parents that did not regularly attend church (Shelton et al., 2013). Parents that attended church regularly also had more negative religious beliefs about the HPV vaccine than parents that did not attend religious services (Shelton et al., 2013). This indicates that religious beliefs can have an influence in HPV vaccine decisions and perceptions. However, it is unclear if other religious beliefs have an influence on HPV decisions. It is also unknown which LDS beliefs may influence HPV vaccine decisions, as no studies on this factor were found during the literature search. The current study provides an opportunity to address this gap in the literature.

### **Summary and Conclusions**

In this chapter, I reviewed literature that discussed the correlates and factors that influenced HPV vaccine views, beliefs, and decisions. Though HPV vaccine coverage is increasing, the number of infections in the United States is still high. Specific factors may influence vaccine uptake, including provider recommendations, a lack of knowledge or awareness, safety concerns, and concerns about other STIs, promiscuity, and a lack of sexual activity. A parent's views and beliefs about the HPV vaccine (e.g., perceived risk, susceptibility, or benefits) influence decisions about the vaccine. Religion, religiosity, and spirituality have also been found to be correlates of HPV vaccine initiation. Religion has been shown to influence health decisions, including HPV vaccinations. An individual's denomination, level of religiousness, beliefs about sexual activity, and how often a person practices religion all have an impact on HPV vaccination initiation.

However, it is not well known what the views and beliefs of LDS parents are regarding the HPV vaccine or how these beliefs influence their decisions. In the present study, I strived to determine LDS parental views about the HPV vaccine and how their religion may influence these perceptions. In Chapter 3, I include a discussion about the methodology for this study, as well as the tools that will be utilized to learn about the views and beliefs of LDS parents.

### Chapter 3: Research Method

In Chapter 2, I presented information that shows that religion can influence health decisions (e.g., HPV vaccine) and that parents play a crucial role in health decisions. However, few studies have focused on the LDS religion, parents, and the HPV vaccine together. Therefore, the purpose of this study was to explore how LDS parents perceive the HPV vaccine and how the beliefs of the LDS religion may influence these perceptions. In this chapter, I provide a review of the research design, role of the researcher, methodology (e.g., selection of participants, instrumentation, data collection, and data analysis plan), and issues with trustworthiness (e.g., ethics).

#### **Research Design and Rationale**

The following research questions were used for my study:

RQ1: What are the Latter-Day Saint parental perceptions on the human papillomavirus vaccine and how do Latter-Day Saint beliefs contribute to these perceptions?

RQ2: What are the experiences of parents regarding the susceptibility to human papillomavirus and what cues to action would encourage human papillomavirus prevention?

For this study, the central concepts were parental perceptions about the severity of and susceptibility to HPV, the influence of religious beliefs on perceptions, and parental perceptions about the barriers and benefits of the HPV vaccine. To investigate these concepts, general qualitative individual semistructured interviews were conducted. There are a few reasons that justify the use of this research design. First, the purpose of this

study was to understand the perceptions of LDS parents about the HPV vaccine and how they believe their religion influences these perceptions. A qualitative design allowed for in-depth discussions about parental perceptions and beliefs, allowing a researcher to dig deeper (see Crawford & Lynn, 2016). Second, semistructured interviews allow for probing questions to be asked to gain greater insight into a participant's beliefs or perceptions (Crawford & Lynn, 2016). Lastly, semistructured interviews provided privacy for participants to share their beliefs without the fear of judgement from their peers. Discussing perceptions, beliefs, or views about HPV and the HPV vaccine could be a sensitive topic and participants (parents) may feel more comfortable discussing their views individually instead of in a group setting.

### **Role of the Researcher**

Crawford (2016) described the role of the researcher as being an instrument in making direct observations, conducting the interviews, and data analyzation. So, for this study the role of the researcher was both participant and observer. As a participant, I developed the interview guide, interview questions, conducted the interviews, and analyzed the data (e.g., coding, categorizing, and developing themes). I acted as an observer during the video conference interviews. During the video conference interviews, I observed the participant (e.g., body language and tone of voice) and took notes on these observations.

There were no personal or professional relationships between me and participants. The only connection between me and participants was the shared religion, as I am also LDS. A potential bias within this study was that I am in favor of vaccines (e.g., the HPV

vaccine). To manage this potential bias, all interview questions, including probes, were reviewed by my chair and committee member to ensure that bias was not present in the questions. The data (e.g., codes, categories, and themes) was also reviewed by my chair.

## **Methodology**

### **Participant Selection Logic**

#### ***Population***

The CDC (2024c) recommended that the HPV vaccine be given at the ages 11 or 12 years old, but the vaccine can be given as early as age nine. It is also recommended that individuals up to the age of 26 years old should also receive the vaccine (CDC, 2024c). Additionally, this study focused on the LDS religion and parental perceptions about the HPV vaccine. Therefore, the targeted group for this study was LDS parents with children ages 9 to 17 years old. The target population also lived in the United States.

#### ***Sampling Strategy***

Purposeful sampling was used in this study. Purposeful sampling is when individuals are selected for the information they can provide on the issue of central importance (Patton, 2015). I focused specifically on the LDS religion, the beliefs within this religion, and how these beliefs inform decisions about the HPV vaccine. Based on the focus of the study, parents who are current members of the LDS religion and have children ages 9 to 17 years old were selected for the information that they could provide on the LDS beliefs and how these beliefs may inform HPV vaccination decisions.

### *Participant Size*

In qualitative research, it can be difficult to know how much data is needed (Baker et al., 2012). A small number of participants is acceptable for qualitative research; but, Adler and Adler recommended graduate students use at least 30 participants (Baker et al., 2012). However, sample size can be determined by the research purpose, the research question, and the methodology that would be used (Baker et al., 2012). Smaller sample sizes may be more prudent than large sample sizes, as analyzing the data in qualitative studies can be time consuming, especially with large sample sizes (Mason, 2010). However, Mason (2010) stated that sample sizes need to be large enough to capture most of the perceptions about a phenomenon, but not too large as this could lead to repetitiveness. Essentially, depth in a qualitative study is what is important, not how many participants are included (Crawford, 2016). Mason (2010) provided a list of guidelines for selecting a sample size and for all qualitative studies, it is recommended that at least 15 participants be selected. Following the provided recommendations, the ideal sample size for this qualitative study was at least 15 participants and a maximum of 30 participants. The final participant size was dependent on when saturation was met, which is what researchers conducting qualitative studies usually use to determine their sample sizes (Mason, 2010). Essentially, once data collection no longer produces new information saturation has been reached, which could affect the sample size (e.g., greater than 15 or less than 30; Mason, 2010).

### ***Criterion***

The CDC (2024c) recommended that the HPV vaccine be given to boys and girls between the ages of 11 and 12 years old but can be given at the age of 9 years old. Children older than 12 years and up to the age of 26 years old can also receive the HPV vaccine (CDC, 2024c). One criterion for participating in my study was that individuals must be parents to children ages 9 to 17 years old. The purpose of this study was to gain an understanding of the perspectives of parents within the LDS religion about the HPV vaccine. So, another criterion was that parents must be members of the LDS religion. Lastly, the study was conducted in the United States. Due to the location of the study, the last criterion was that individuals must live in the United States.

### ***Identifying, Contacting, and Recruiting Participants***

Participants were identified through social media platforms. The media flyer for this study was posted on LDS ward and church Facebook pages. This flyer was also posted on Twitter and Instagram using hashtags, such as LDS, HVP vaccine, HPV, and LDS parents. In addition to social media, participants were also recruited through flyers posted on community boards at grocery stores, libraries, and word of mouth. Contact with the participants was through email. If a participant contacted me about their interest in the study, they were emailed a copy of the consent form (which contained information about the study) as well as the criteria for participating in the study.

### ***Instrumentation***

The instrumentation that I used to answer the research questions for this study consisted of an interview guide, field notes, the interviewer, Dedoose, Zoom, and an



audio tape/recording device. I created the interview guide (Appendix A) for this study. The guide included an introduction to reintroduce the participants to the study and interview, interview questions (e.g., about HPV, participant views about HPV, information about the LDS religion, and how these views influence HPV vaccine decisions), and a closing statement. The interview guide allowed for the interviews with each participant to be organized, allowing for a smooth interview. The interview guide has also been used in past qualitative studies to organize interviews (see Hansen et al., 2016; Katz et al., 2016; Niccolai et al., 2015). Katz et al. (2016) created an interview protocol for their qualitative study in which interview questions were organized by topic. Interview guides have also been used to ensure that interviews are cohesive (Hansen et al., 2016). Content validity for the interview protocol was established through the dissertation committee. The interview protocol was reviewed by the committee to ensure that the interview questions were relevant to the research questions and the constructs of the HBM.

Field notes were taken during the individual interviews. These notes were used to record observations, such as body language, facial expressions, and an emphasis on a statement or word that the audio tapes may not have recorded. Notes and journals can provide “context to the interpretation of audio-taped data” (Sutton & Austin, 2015, p. 227). An audio tape alone does not provide insight into what the researcher observes during an interview. The field notes provide an additional context into what a participant was experiencing or how they reacted to the topic. As the interviewer, I was also an instrument in this study. As this is a qualitative study, the interviewer is a key component

in the data collection process. I conducted the interviews for this study, wrote down observations during and after each interview, and ensured that each participant was comfortable and understood all the components of the interview and study.

Dedoose is an online qualitative data management (QDM) program that I used to code and analyze the data collected in this study. This program is web based, which allowed me to access the data anywhere (see Dedoose, 2021). Additionally, all data and information saved on Dedoose is encrypted, which keeps sensitive materials secure (Dedoose, 2021). Dedoose has also been used in previous qualitative studies to organize and analyze interview data (see MacCarthy et al., 2021; Sharp et al., 2021; Yan et al., 2019). Using Dedoose in this study provided a way to organize and analyze the data collected.

Audio tapes or recording devices have also been used in past qualitative studies to help record interviews. Past interviews have been audio recorded and then transcribed verbatim so that the data could be analyzed for potential themes (Creed et al., 2021; Edler et al., 2019; Forster et al., 2017; Hansen et al., 2016; Katz et al., 2016; Niccolai et al., 2015; Ogunbajo et al., 2016; Wilson et al., 2021). Using audio tapes or recording devices allowed for the whole interview to be recorded so that I could review and analyze it later. As this is a qualitative study, the ability to review what each participant says will allow for improved analysis and thematic development. For this study, Audio Recorder developed by Protection & Security App LLC, an audio recording application (app) was downloaded onto an iPhone.

### **Procedures for Recruitment, Participation, and Data Collection**

Print flyers and social media flyers were posted on Ward Facebook pages (when possible), on community boards in different businesses (i.e., grocery stores), and on other social media sites (i.e., Twitter and Instagram). Detailed information about this study (e.g., what it is about, what participation would entail, criteria for participation, and contact information) was provided on the flyers. Participants were asked to contact me through email.

Once participants initiated contact with myself, they were emailed an informed consent form and asked to reply to the email with the words “I consent” if they agreed. This was done before the interviews took place. Participants were offered the choice to complete the interviews in-person, over the phone, through a video call (i.e., Zoom), and through email. Email interviews entailed all the questions being sent to participants. Once a participant emailed their responses back to me follow-up questions were sent, if necessary.

I, as the researcher, collected the data for this study, as I was also the interviewer. Interviews were scheduled for 45 minutes each and took place 15 to 30 times, depending on how many individuals agreed to participate in the study (one interview per participant). Email interviews took about two days to complete as emails were sent between myself and the interviewee. Video interviews were recorded utilizing Audio Recorder, which was downloaded onto an iPhone. Observations were also recorded in field notes contained in a notebook. At the end of each interview, a closing statement was given to each participant in which participants were thanked for their participation and

encouraged to email me if they had any questions once the interview was over.

Participants were also sent a \$10 Amazon gift card once they completed the interview.

Participants with copied responses were not sent a gift card and their answers were excluded from the final study.

### **Data Analysis Plan**

The data analysis for this study began with the transcription of the video interviews. Each video interview was transcribed verbatim utilizing the transcription program Otter.ai. This program can be used, in real time, to transcribe speech into text, as well as transcribe recorded audio (Chia et al., 2021; Otter.ai, 2021). The program Otter.ai has also been used for transcribing in previous studies. In their study, DeGrazia et al. (2023) equipped Otter.ai to transcribe their recorded interviews verbatim. However, I reviewed the transcript for accuracy, which can also be done using Otter.ai. Chia et al. (2021) describes that after an interview is transcribed, researchers can go back and check or refine the transcription using the playback of the recording on Otter.ai. Notes taken during each interview were added manually to the transcriptions and added to the parts of the transcription they coincided with.

Once the transcripts were finalized, IPA was used to code the transcripts. The IPA is used to examine the lived experiences of individuals and this examination is based on the researcher's interpretation (see Smith & Osborn, 2015). The first step in using the IPA would be to become aware of personal biases and address any preconceptions that may be present about the topic of interest (Patton, 2015). Therefore, before coding began,

I wrote down all biases and preconceptions about HPV, the HPV vaccine, the LDS religion, vaccinations, and parental decisions regarding the health of their children.

Once my biases and preconceptions were known, coding began. As part of the IPA, bracketing was utilized to code the data, along with In Vivo coding. In Vivo coding involves using the words of participants for the codes (Saldaña, 2016). As part of bracketing, each interview was reviewed with the intention of locating key phrases about the participants experiences that relate directly with the phenomenon in this study (Patton, 2015). Though not stated as part of the phenomenological analysis method, categories were developed from the codes. Then from the codes and categories, themes were developed and deeper meanings of the experiences of the individuals interviewed were constructed (Patton, 2015). Saturation was also looked for during data analysis. All analyses were conducted using the QDM program Dedoose.

### **Issues of Trustworthiness**

#### **Credibility**

Credibility means that the study findings are believable (Crawford, 2016). There are many strategies that can be utilized to ensure that credibility is met. Some of these can include persistent observation, reflexivity, peer debriefing, triangulation, and member checking (Crawford, 2016). The strategies that were utilized in this study were member checking, triangulation, reflexivity, and peer debriefing. Member checking involves participants providing feedback on their interview transcripts and the findings from these transcripts (Crawford, 2016).

Triangulation is another strategy that was utilized. Triangulation involves the verification of the conclusion(s) using multiple sources (Crawford, 2016). Within the discussion section of this study, multiple sources (e.g., previous studies) are used to support the conclusion(s) of the current study. Finally, peer debriefing was also employed to ensure that credibility was met. Peer debriefers (e.g., dissertation committee, classmates, and work peers) were involved in the study from the interview guide development to data coding. These peer debriefers provided constructive feedback on the interview guide, interview techniques, interview questions, and coding processes.

### **Transferability**

Transferability is about how applicable the findings of a study are to other situations (Crawford, 2016). To ensure transferability, strategies could include thick description and maximum variation (Crawford, 2016). For this dissertation, thick descriptions and maximum variation were used. To address thick descriptions, descriptions were provided on participant criteria, the setting of the interviews, and evidence to support the findings of this study (e.g., quotes from the interviewees). Maximum variation was also used to address transferability. Maximum variation is when the study population is diversified to ensure applicability (Crawford, 2016). Though the dissertation focuses on a specific population (e.g., parents in the LDS religion), maximum variation can still be met by interviewing parents from different wards in different parts of the United States.

**Dependability**

Dependability is when there is “consistency in data collection, analysis, and reporting” (Crawford, 2016, p. 75). According to Shenton (2004), to ensure dependability in a study the processes used in “the study should be reported in detail” (p. 71) (e.g., an inquiry trail or audit trail). An audit trail is the strategy that will be utilized in this study. The research design (e.g., approach, role of researcher, participant selection, and instrumentation) and how data was collected (e.g., data collection) is discussed in detail in this paper. Another strategy that was utilized was triangulation, which is when multiple sources are used to verify a conclusion (see Crawford, 2016). I used triangulation to verify the conclusions in this study and in doing so, ensure these conclusions are dependable.

**Confirmability**

Confirmability is when other researchers, that are informed about the research, arrive at the same conclusions after examining the data (Crawford, 2016). Confirmability is essentially about ensuring that the results are due to the experiences of the participants and not the biases of the researcher (see Shenton, 2004). Two strategies to ensure confirmability are reflexivity and audit trails. Reflexivity involves documenting any biases that the researcher may have in field notes or journals, the researcher’s role within the study, and any changes made to the study (Crawford, 2016). I noted any biases before data analysis took place and my role in the study was explained within the section titled Role of the Researcher within Chapter 3. Audit trails were also utilized to ensure confirmability. Descriptions of the research process (e.g., participant selection,

instrumentation, and data collection procedures) were provided in detail within this paper. This would allow other researchers to assess the data to determine if they come to the same conclusions.

### **Ethical Procedures**

Before data collection occurs, approval from the institutional review board (IRB) was obtained. The IRB approval number for this study is 07-26-22-0993598. Approval was also obtained from the Correlation Research Division for the LDS church. However, the Correlation Research Division stated that posting flyers for the study in church buildings was not allowed, but they did give their approval for the study. I avoided collecting data from my own ward to avoid any biases. An ethical concern during recruitment was privacy. Interested participants were asked to email me. This method of communication identified individuals either from their name or email address. To protect the privacy of potential participants, all identifying information is being kept on a thumb drive specifically used for this study. The thumb drive is stored in a locked box, in which only the researcher has access.

An informed consent was created and approved by the IRB. The approved informed consent was emailed to each participant. Participants had to read the informed consent and reply to the email with the words “I consent” before interviews began. I reiterated that participants could ask questions for clarification about the study or informed consent. Before the interviews began, I went over the study and informed consent again to ensure participant understanding.



Given the types of questions that were asked, an ethical consideration may be confidentiality. With confidentiality, all identifying information (e.g., names or location) would have to be concealed (see Patton, 2015). Since participants were asked about their religious beliefs and how they think it impacts their views of the HPV vaccine, it was important to keep their identification confidential during the interview. The participants may not want their friends or acquaintances at church to know what they think about the subject. Therefore, all identifying information was removed from transcripts and participants were assigned a number.

To protect the confidential data, information (e.g., interviews and names) was saved on a thumb drive used specifically for this study. This thumb drive is kept in a locked box accessible only to me. Lastly, all data will be destroyed five years after the study ends. The thumb drive will be cleared of all study data and any paper documents used in the study will also be deleted. One last ethical consideration for this study is that I am also part of the LDS religion. This commonality could present a potential conflict of interest. To overcome this conflict of interest, interview questions and analyzed data (e.g., codes and themes) were reviewed by the dissertation committee chair.

### **Summary**

In Chapter 3, I discussed the reasons for needing to use a general qualitative research design and the methodology required for this design. Data collection (e.g., semi-structured interviews) and analysis (IPA) were also explained in detail. Issues with trustworthiness and ethical considerations were discussed, as well as ways to address them. In Chapter 4, I will review background information for the collections of data for

the study including the setting, data collection, and data analysis. Evidence of trustworthiness will also be reviewed before the results of the interviews are discussed.

## Chapter 4: Results

The purpose of this study was to explore how LDS parents perceive the HPV vaccine severity, benefits, and barriers in the United States, and how the beliefs of the LDS religion may influence these views. In this study, I also explored the experiences of parents regarding susceptibility to HPV and cues to action to HPV prevention. The research questions for this study were:

RQ1: What are the LDS parental perceptions of the HPV vaccine and how do LDS beliefs contribute to these perceptions?

RQ2: What are the experiences of parents regarding the susceptibility to HPV and what cues to action would encourage HPV prevention?

In this chapter, I discuss the demographics and data collection. An in-depth analysis of the data collected through the individual interviews, as well as a look into the trustworthiness of the results is also reviewed. The presented research questions are also answered.

### Setting

At the time of this study, there were no personal or organizational conditions that may have influenced the participants or their experiences. Recruitment for the study was done through social media platforms, such as Instagram, Facebook, and Twitter. Hard copy flyers for the study were also posted at grocery stores. Individuals who agreed to participate in this study were sent a consent form and were notified through email (if they chose an email interview) of their right to end the interview or drop out of the study at any point for any reason. The consent form also stated that individuals would not be

treated differently by the LDS church for participating or not participating in this study. Individuals were also informed within the consent form that their identity would be kept confidential. All participants indicated that they met the inclusion criteria for this study. Interview questions focused on the perceptions of the participants about the HPV vaccine and how the LDS may influence their perceptions. Data collection was consistent with each participant. Most of the interviews were conducted through email and only two were conducted via Zoom in a private room.

### **Demographics**

The demographics and characteristics collected for this study were the number of children each participant had, the ages and genders of the children, how long each participant has been a member of the LDS church, and how often they attend church. Children's ages and how often the participants attend church in a month were part of the inclusion criteria for this study. The collected demographic information is presented in Table 1.

**Table 1***Participant Demographics*

Variable ( <i>N</i> = 17)	Frequency	Percentage
<b>Number of children</b>		
1-2 children	13	72%
3-4 children	5	28%
5 or more children	0	0%
<b>Ages of children</b>		
8 years and younger	2	6%
9-12 years	16	44%
13-17 years	18	50%
<b>Gender of children</b>		
Female	19	53%
Male	16	44%
Unknown	1	3%
<b>Length of LDS membership (years)</b>		
0-5 years	1	6%
6-10 years	6	33%
11-15 years	4	22%
16 or more years	7	39%
<b>How Often Attend Church in a Month</b>		
3 times	6	33%
4 times	12	67%

**Data Collection**

Data collection was done through individual interviews. Participants had the option to do the interview through email, phone, Zoom, or in-person. Sixteen of the participants chose to do the interview by email. Two participants chose to do the interview by Zoom. Participants that chose the email interview were sent the interview questions in a Word document. Once their responses were received, they were read through and, if necessary, participants were asked follow-up questions to glean more information. Participants recorded their responses either on the Word document that the

interview questions were sent on or they sent their answers in email form. The other two interviews took place over Zoom. These Zoom interviews were scheduled with the participants. The responses for these interviews were audio recorded. In Chapter 3, I indicated that interview questions would be sent one question at a time. However, the interview questions ended up being sent to the participants all at once, instead of one at time. This was the only variation from what was presented in Chapter 3.

There was an unusual circumstance that occurred during data collection. There were several email interviews that took place where multiple answers from different participants were identical or very similar. These participants would outright copy answers from other participants or would change a word or two in their responses. Upon discussing this with the committee Chair, it was decided that these responses would be excluded from the results and those that had not been sent payment for their participation were informed that they would not be sent the gift card due to their copied answers. It was also discussed that these copied responses may have been from Bots, but it is unknown if they were Bots or not.

### **Data Analysis**

The data analysis for this study began with the transcription of the audio recorded interviews using the software Otter.ai. Once the transcription was complete, the software Dedoose (2021) was used to code each interview transcript. An IPA was used to code the transcripts, which included looking at the lived experiences of the participants and how I interpreted these experiences (see Patton, 2015). Also, part of the IPA was that I had to be aware of any personal biases and preconceptions about the topic of interest (see

Patton, 2015). Therefore, before coding began, any biases or preconceptions about the LDS religion, the LDS beliefs, parental decisions about their children's health, HPV, and the HPV vaccine were written down.

Coding then began, using bracketing and In Vivo coding. In using bracketing, I was looking for phrases related to HPV, parental views or experiences, the LDS church and beliefs, and the HPV vaccine. For instance, one code was "reception not stopped" which was based on the participant's answer stating that their faith "informs [them] positively and doesn't stop [their] idea of receiving [the vaccine]". After the coding of each transcript was complete, the codes were placed into categories. These categories involved areas such as decision to vaccinate, benefits, barriers, severity, susceptibility, vaccine experience, LDS beliefs on sex, and faith informed views. Three main themes (i.e., parental perceptions about the HPV vaccine, parental attitudes towards the HPV vaccine, and faith informed views towards the HPV vaccine) were then construed.

There were a couple discrepant interviews. A majority of the interviews showed participants had a favorable view of the HPV vaccine and that the participant's faith did not inform or influence their decisions about the HPV vaccine or healthcare. However, there were a few interviews where participants indicated a negative outlook on the HPV vaccine and implied that their faith views the HPV vaccine negatively. These few discrepant interviews were factored into the analysis as they were still the views and perspectives of LDS parents regarding the HPV vaccine.

## **Evidence of Trustworthiness**

### **Credibility**

In Chapter 3, I chose three strategies to ensure credibility in this research: member checking, triangulation, and peer debriefing. Member checking involves sending transcripts of interviews to participants to review and provide feedback on, as well as providing feedback on the findings from the transcripts (Crawford, 2016). A majority of the interviews were conducted through email, so transcripts were not sent to the participants as they wrote out their responses. The findings from the transcripts were also not sent to participants to review. However, a brief analysis of the findings from this study will be sent to participants. As member checking was not completely used, another strategy to ensure credibility was selected. This strategy was reflexivity. Before analyzing the data, any biases I had about the study subject were written down. The role of the researcher was also documented in Chapter 3 of this dissertation. Changes made to this study have also been documented.

Peer debriefing was also incorporated by involving my committee chair in the development process of the interview materials. The interview guide, which included the interview questions, interview technique, and coding processes were provided in Chapter 3, with the interview guide and questions in Appendix A. The committee chair and second committee member reviewed these materials and provided constructive feedback on ways to improve each part. The committee chair was also involved throughout the interview process and the data analysis. Changes to the interview criterion were changed as there was difficulty in finding participants. These changes were shared with the



committee chair for feedback before they were implemented. The codes, categories, and themes that were developed were also shared with the committee chair for feedback.

Last, triangulation was incorporated using data source triangulation. Data source triangulation is when data is collected “from different types of people, including individuals, groups, families, and communities, to gain multiple perspectives and validation of data” (Nancy et al., 2014, p. 545). The data for this study was collected from different types of people, presumably from across the United States. This provided an opportunity to gain multiple perspectives from different people.

### **Transferability**

For this study, the two strategies to ensure transferability were thick description and maximum variation. Thick description was used by providing descriptions for the criteria for participants and the locations for the interviews in Chapter 3 and 4 of this dissertation. Maximum variation is when the study population is diversified to ensure applicability (Crawford, 2016). Maximum variation was implemented by interviewing different people from across the United States. It was also assumed that the interviewees were from different wards as well.

### **Dependability**

In Chapter 3, I indicated that an audit trail would be used to ensure dependability. An audit trail is when details are provided about how a study was accomplished and how data was analyzed (Crawford, 2016). An audit trail was used by providing in detail the research design and data collection. Triangulation was also used to ensure dependability. This means that a claim or assertion is verified using more than one data source

(Crawford, 2016). Data for this study was collected from different people throughout the United States, allowing for multiple perspectives to be gleaned.

### **Confirmability**

To ensure confirmability reflexivity and audit trails were used. Reflexivity involves documenting any biases that the researcher may have in field notes or journals, the researcher's role within the study, and any changes made to the study (Crawford, 2016). For reflexivity, I wrote down any biases before data analysis occurred. My role as the researcher in the study and changes made to the study were noted in Chapter 3 and 4 of this paper. To use audit trails, descriptions of the research process, such as participant selection, instrumentation, and data collection procedures, were described in detail in Chapter 3. This would ensure that other researchers could assess the data and determine if they come to the same conclusions.

## **Results**

### **RQ1**

#### ***Parental Perceptions about the HPV Vaccine***

Parental perceptions were a major focus of this study. Some of the perceptions explored were perceptions on the benefits, barriers, susceptibility, and severity of the HPV vaccine. Each participant was asked about their perceptions in each of these areas. Each type of perception was established as a subtheme.

**Benefits.** Participants were asked about their perceptions of the benefits of receiving the HPV vaccine for their children. A majority of the participants saw the benefits of the HPV vaccine as a way to prevent cancer. Participant 1 stated that they “see

it as a very important vaccine to be taken because it prevents the infections that causes cancer”. Participant 3 stated that “with what [they] know about the vaccine it helps halt cervical cancer”. Participant 4 said “the vaccine is out to protect against cervical cancer”. Participant 11 shared that “it’s a vaccine that prevent[s] against most cases of cervical cancer”. Participant 15 stated that “the vaccine is on our side to protect or fight against cervical cancer”.

Some of the participants also saw the HPV vaccine as a way to help protect against sexually related diseases or HPV related diseases. Participant 4 shared that “the vaccine is out to protect against cervical cancer or any sexual related diseases”. Participant 5 stated that “they put it out to protect against STDs or other sexual related diseases”. Participant 6 said, “I perceive it’s taken as a vaccine to protect against HPV or sexual diseases related to that”. Participant 8 mentioned that it’s “to protect against sexual diseases of the virus itself”. Participant 10 shared that “the vaccine is effective in preventing infections that can be caused by HPV [...and] it reduces the spread of HIV by decreasing the prevalence of HPV related diseases”. Participant 14 stated that “the vaccine is advised to protect against sexual diseases”. However, Participant 9 did not mention any benefits and had this to say about the vaccine. Participant 9 said, “I feel it’s being forced on people and people are coerced into it.”

**Barriers.** Participants were also asked about potential barriers they perceived to getting the HPV vaccine. There were a variety of barriers that participants described related to the HPV vaccine. Some of these were cost, fear of the side effects, lack of information, lack of awareness, lack of accessibility, the effectiveness of the vaccine, and

promiscuity. Participant 1 said, “[some barriers could be] fear of not being able to pay and of its side effects.” Participant 2 stated, “[barriers could be] cultural or spiritual beliefs, some people don't see it as appropriate, fear of side effects, cost, not enough information on how to access the vaccine, no awareness about the vaccine.” Participant 3 stated that,

Personally, for me, the barriers [related to the HPV vaccine are that it] will [not be] easily accessible to get them... because I believe I can't just walk into a clinic and get it... so accessibility is a huge factor for me and also it's not publicly known [and] many out there might still not have heard of it..

Participant 4 said that “publicity is one of the barriers, and it's hugely expensive (from experience).” Participant 9 said that “I want to believe that it's an avenue for promiscuity, it might not work out in the long run scientifically as expected, [and] I expect educative lessons about HPV.” Participant 11 stated that “some of the barriers could be the fear of the efficiency and effectiveness of the vaccine, lack of knowledge about the vaccine, and also the cost of getting it.” Participant 13 listed out their barriers which were, “fear of its efficiency, the side effects [and] if it [will] lead to [the] development of a new phenomenon in the body system, being sexually active, having multiple sexual partners, [and] inadequate information about the vaccine.”

**Severity.** When asked about their perceptions of the severity of HPV, most of the participants saw HPV as not being very serious or severe. Some of the participants mentioned that the lack of severity of the disease was based on the ability to manage it and receiving early treatment. For instance, participant 4 stated that “early treatment is

important [for] any [disease] so I believe if treated early enough, it [is] possible to get ahead of it and fight it properly.” Participant 1 stated “[HPV is] not too severe.”

Participant 2 said, “[HPV is] not very severe, I believe it can be managed.” Participant 3 shared “uhm no, I feel if an illness is noticed early then uhm it can be cured early, so if given the vaccine early then the[re] is nothing to worry about.” Participant 7 mentioned that “research said [HPV] should not be that serious.” Participant 8 said that “[HPV is] not very severe, I believe it can be managed.” Participant 15 shared that “early treatment is the key to any diseases so if treated early [HPV is] really not something to worry about.”

However, there were a few participants that saw HPV as being severe. Participant 11 said that HPV is “somewhat severe due to how important it is.” Participant 13 stated that “it can be life threatening in children and younger ones[,] it might lead to cancer[, it] causes genital warts[, and] leads to bump[s] on the skin. It is very severe.” Participant 17 shared that “it is [a] severe virus.”

**Susceptibility.** Perceptions about their child or children’s susceptibility to HPV was another question posed to participants. A majority of the participants indicated that they believed their child or children were susceptible to HPV. This susceptibility ranged from highly susceptible to a bit susceptible. Participant 2 said that their child is “very susceptible”. Participant 4 stated their child is “highly susceptible, because sometimes my boy is caught up in things which I least expected and it’s really difficult knowing what [he’ll do next].” Participant 5 said their child was,

A bit susceptible[.] A bit because you can never really know what kids [these] days are into[.] [I] am saying this because [I] am very close to my kids but I know there are some [...] things which they keep secret even from me.

Participant 12 stated their kids are, “highly susceptible[.] I try to get involved in their life as much as I can, but you can never be quite sure what they are into [these] days.”

Other participants did not believe their child or children were susceptible to HPV. Participant 1 said “they aren’t too susceptible about it [HPV].” Participant 8 said, “I would say they're not susceptible [to HPV.] I’m very keen on abstinence from sexual activities.” Participant 10 stated, “I can say that they are not susceptible to it [HPV], my belief frowns at sex before marriage and I believe they do too.” Participant 13 mentioned, “it [HPV] must have been [taught] in the course of education and seeking knowledge. I believe they have good morals to guide them that it is not a license to indulge in sexual activity.” Finally, Participant 14 stated their children were “not susceptible. I try to be involved in my children’s life and know about the kind of activities they engage in.”

### ***Faith Informed Views Towards the HPV Vaccine***

Participants were asked about how the LDS faith informed their views about the HPV vaccine. One view that participants had was that their faith did not inform their views about the HPV vaccine and that they do not confuse religion with healthcare. For instance, Participant 3 said “personally I think confusing faith with healthcare services is dumb. Health is extremely important and can’t be compromised.” Participant 4 shared that “health is important so I don’t think I will bring faith into Health matters!”

Participant 5 said, “it is an important aspect of life so I don’t think faith can compromise if we are to receive healthcare or not.” Participant 12 mentioned that “healthcare is quite necessarily or important part of life and with or without faith it is important (health wise).” Participant 13 stated, “my faith has nothing to do with my health. I believe medical doctors know best.”

Other participants believed their faith informed their views of HPV positively. Participant 1 said: “It informs me positively and doesn’t stop my idea of receiving it.” Participant 11 also said “My faith informs my views of using the HPV vaccine positively.”

Lastly, a few participants mentioned that the church advises against the HPV vaccine. Participant 7 said “My faith cements the facts that HPV is for people who don’t honor their body and God’s law.” Participant 9 stated “I stand in the doctrine of the church; I rather not take the HPV vaccine.” Participant 10 also said “It’s not very advisable because it is believed to promote sexual activities before marriage.”

**LDS Views on Sex.** When asked about the LDS religion’s views on sex, a majority of the participants had the same, if not similar, thing to say about the religion’s views on sex. Most said that sex was for wedded couples or that the church frowns on or is against premarital sex. For instance, Participant 5 said “sex is only meant for legally wedded partners.” Participant 2 shared that it “frowns against premarital sex” Participant 6 stated, “to abstain from sexual relations before marriage.” Participant 7 said, “no sex before marriage. No adultery, no infidelity, marriage is beautiful and should be honored.”

Participant 10 stated, “chaste. No sexual relations before marriage.” Participant 14 said, “premarital sex if frowned at. Not encouraged.”

A couple of the participants also mentioned that the LDS religion only believes in sexual activity between the opposite gender. Participant 1 said “we believe in opposite gender sex activity” and Participant 11 stated “we believe in being straight and having the proper type of different gender sex.”

One participant, Participant 3, mentioned their own belief about sex stating “OK, uhm I don’t believe in the whole traditional setting of sex till marriage and all that, I believe in being mature first and then always protect yourself.” When asked what the LDS religion’s view was on sex Participant 3 said “Sex [is] only to be done by married couples.”



**Table 2***Codes and Themes for RQ1*

Research Question	Codes	Themes
RQ1: What is the LDS parental perceptions of the HPV vaccine?	"Cancer Prevention", "halt risk of cervical cancer", "prevents against cervical cancer", "protect against sexual diseases", "protect against sexually transmitted" diseases,	Parental perceptions about the HPV vaccine Subtheme: Benefits Subtheme: Barriers Subtheme: Severity
SubQ1: How do LDS beliefs contribute to these perceptions?	"protect or fight against any sexual related issues", "protect or fight against cervical cancer" "being sexually active", "avenue for promiscuity", "cultural or spiritual beliefs", "cost of getting" vaccine, "cost", "believed to promote sex" before marriage, "expensive", "fear of efficiency and effectiveness of vaccine", "fear of its efficiency", "inadequate information about the vaccine" "Can be managed", "I think not" severe with right treatment is manageable, "it is very severe", "life threatening", "Not very severe", "severe but not very", "treated early nothing to worry about" "don't think they're susceptible", "good morals to guide them", "highly susceptible", "hugely expensive", "not susceptible", "Very susceptible", child has "total knowledge and awareness of HPV"	Subtheme: Susceptibility
	"don't confuse faith with healthcare service", "faith has	Faith informed views towards the HPV vaccine

Research Question	Codes	Themes
	nothing to do with my health", "faith informs my views[...] positively", "healthcare important part of life with or without faith", "medical doctors know best", "not very advisable" from faith, "rather not take the HPV vaccine" "believe in being straight", "frown at sex before marriage", "No sex", "no sexual relations before marriage", "only to be done by wedded couples", "premarital sex frowned at", "sex is for couples", "sex only to be consummated by wedded couples", Abstinence from sex	Subtheme: LDS beliefs on sex

## RQ2

### *Parental Attitudes Towards the HPV Vaccine*

**Parental Decision to Vaccinate Children.** Participants were also asked about whether they would vaccinate their child or children and why. A majority of the participants indicated that they would vaccinate their child or children for various reasons. One of the reasons was that it would be beneficial to their child. Participant 1 said "I would vaccinate him [their child] because it will be very beneficial." Participant 3 said, "definitely! I would let them take the vaccine if it's important to their health." Participant 5 stated, "yes I will let them have it [the HPV vaccine] if it's for their good." Participant 11 said, "I would [vaccinate] because it is for my child's benefit." Participant 18 said, "For me I would [ get the vaccine] for them to [...] be safe."

Other participants indicated that they would vaccinate their child or children if either their doctor advised them to get it or if it was medically necessary. Participant 2 stated,

I would vaccinate my child if the doctor advises [me to get] it, [and] when I have more information about the side effects [...] to ensure it is safe. I would also do it to protect them from future [health] risks.

Participant 6 said, “I would [... vaccinate] if my family doctor advises it or I deem it fit to [get the vaccine].” Participant 13 stated, “medically [it’s] okay to take the vaccin[e].” Participant 14 shared that they would vaccinate their child “if my doctor advises [me to get the vaccine ...] and I’m okay with the procedures [...].”

Some of the participants indicated that they would vaccinate their child if there was a need for them to be vaccinated. Participant 4 said “I will [get the vaccine] if there is need for [... my kids] to have it.” Participant 12 stated, “surely! I will [get the vaccine] if there is need for [... my kids] to get vaccinated.” Participant 15 said, “I will [get my kids vaccinated] if there is need for them to have it.”

Some of the participants indicated that they would not vaccinate their child for different reasons. Participant 8 mentioned they would not vaccinate their child or children because they are not susceptible to HPV. They said “I would not [vaccinate my kids] because I don’t think they’re susceptible to the virus. And also[,] I teach them not to engage in sexual activities [...].” Other participant reasons were religion, not feeling the need to vaccinate, and not seeing a danger in not vaccinating. Participant 7 said, “my religion forbids it. I wouldn’t [get the vaccine]. It’s up to my kids to decide [if they’ll get

the vaccine] [...].” Participant 9 shared that “there isn’t any danger in not vaccinating my child against HPV. It depends on my child.” Participant 10 said “I wouldn’t [vaccinate my children] because I don’t feel the need to, at least not yet.”

**Parental Experiences with the HPV Vaccine.** Lastly, participants were asked about their experiences with the HPV vaccine. Most of the participants had not had any personal experience with the vaccine. Participant 3 said: “No, I haven’t gotten the vaccine before, but [I] have read a lot of positive response[s] or feedback from people who [have gotten the vaccine].” Participant 5 said, “I have not taken the vaccine before but [my] coworker[s] have and [...] the review I have gotten [...] is] mostly positive.” Participant 8 stated they had “no personal experiences” with the vaccine. Participant 9 shared that “[...the vaccine is] over emphasized. I’m starting to think there is another agenda behind it.” Participant 12 said they did not have “[...] a personal experience, but a close friend and colleague got the vaccine and it worked well for her.”

Some of the participants have had experiences with the HPV vaccine that have been positive. Participant 1 said that getting the HPV vaccine “[...has been a positive experience so far.” Participant 4 stated, “yes I have gotten the vaccine before and it worked perfectly.” Participant 11 shared that getting the vaccine has “[...] been a good experience so far and I have no fears of the vaccine.” Participant 15 said, “yes I have gotten the vaccine before and it worked tremendously.”

**Table 3***Codes and Themes for RQ2*

Research Question	Codes	Themes
RQ2: What are the experiences of parents regarding the susceptibility to HPV? SubQ2: What cues to action would encourage HPV prevention?	"good experience so far", "no fears of the vaccine", "no personal experiences", "Positive Experience", "worked perfectly", "yes I have gotten the vaccine" "for my child's benefit", "I would" vaccinate, "If I deem it fit", "if my doctor advises it", "medically okay to take vaccination", "Will [vaccinate] if there is need for them to have it", "would not" vaccinate, "Would vaccinate"	Parental attitudes towards the HPV vaccine Subtheme: Vaccine experience Subtheme: Decision to vaccinate

**Summary**

Three themes were developed in this chapter: parental perceptions about the HPV vaccine, faith informed views towards the HPV vaccine, and parental attitudes towards the HPV vaccine. I used the first two themes to answer the first research question regarding parental perceptions about the HPV vaccine and how the LDS beliefs contribute to these perceptions. With the last theme I was able to answer the second research question regarding parental views on HPV susceptibility.

**RQ1**

For this research question, the perceptions that were explored were benefits, severity, and barriers. A majority of the participants saw the benefits of the HPV vaccine as a way to protect against diseases (i.e., diseases caused by HPV, other STDs, and

cancer). Only one participant did not voice any benefits to receiving the vaccine. In regard to severity, most of the participants did not view HPV as very severe and believed that it could be managed. Lastly, participants mentioned a variety of barriers to receiving the HPV vaccine. The most notable barrier was a lack of information about the vaccine and worry about how efficient or effect the vaccine will be.

To answer the second part of the first question participants were asked about the LDS views regarding sex and faith informed views towards the HPV vaccine. Most of the participants did not believe that their faith informed their views about the HPV vaccine and there was a consensus that the LDS views about sex was that it is meant for wedded couples of the opposite sex.

## **RQ2**

A majority of participants did not have any experiences with the HPV vaccine and those that did had a positive experience. Most of the parents indicated that they would vaccinate their child or children if their child would benefit from it or if their doctor recommended the vaccine. However, a few parents said they would not vaccinate their child or children as they either did not feel there was a need to or stated that their religion forbids the use of the HPV vaccine. In regard to their child's susceptibility to HPV most parents believed their child or children were either highly or a bit susceptible to HPV due to not always knowing what their kids are up to. However, other parents mentioned that they did not think that their children were susceptible because of abstaining from sexual activities before marriage.

In the upcoming chapter, an interpretation of the results from this chapter will be discussed in the context of the theoretical framework used in this study (the HBM). The results will also be compared to previous studies discussed in the literature review in Chapter 2. I will also discuss the limitations of this study, recommendations for future research, and implications for social change.

## Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this general qualitative study was to explore how LDS parents perceive the HPV vaccine severity, benefits, and barriers in the United States, and how the beliefs of the LDS religion may influence these views. I also aimed to explore the experiences of parents regarding susceptibility to HPV and cues to action to HPV prevention. The theoretical framework used in this study was the HBM, which was used to gain a better understanding of the beliefs and perspectives of the targeted demographic and how these beliefs can influence health decisions or behaviors (Hayden, 2019; Rosenstock, 1974).

Data was collected mostly through email interviews with 15 participants and two participants were interviewed via Zoom. The analysis of the data from these interviews illustrated three major themes: parental attitudes towards the HPV vaccine, faith informed views towards the HPV vaccine, and parental perceptions about the HPV vaccine. There were also seven subthemes: (a) parental experiences with the HPV vaccine, (b) susceptibility, (c) parental decision to vaccinate children, (d) LDS views on sex, (e) severity, (f) barriers, and (g) benefits.

This indicated that for a majority of participants, religion did not play a role or influence their decision to vaccinate their child or children. There were also many benefits and barriers that participant pointed out such as protection against cancer and a lack of information. A majority of participants also indicated that they would vaccinate their children; however, most participants had no experience with the vaccine. Most participants also did not see HPV as being a severe disease and when it came to their



child's susceptibility to the disease half of the participants believed their child was susceptible, while the other half did not. The interpretation of these findings are reviewed further in the next section.

### **Interpretation of the Findings**

In this section, I provide an interpretation of the findings from this study compared to the findings from the studies discussed in Chapter 2. This comparison includes how the results add to the research discussed in Chapter 2, as well as how the results are similar. The findings will be broken down into the major and subthemes.

#### **Parental Perceptions About the HPV Vaccine**

##### ***Barriers***

Participants expressed a variety of barriers to accessing the HPV vaccine. These barriers were cost, fear of the side effects, religious beliefs, lack of information, lack of awareness, lack of accessibility, the effectiveness of the vaccine, and promiscuity. One participant stated that barriers to getting the vaccine are “cultural or spiritual beliefs, some people don't see it as appropriate, fear of side effects, cost, not enough information on how to access the vaccine, no awareness about the vaccine.” These views were similar to the findings in existing research that showed that doubts about the effectiveness of the vaccine, concerns about kids becoming sexually active and the safety of the vaccine, the side effects of the vaccine, a lack of health insurance, a lack of information, religion, and costs were all barriers to the vaccine (see Galbraith et al., 2016; Galbraith et al., 2019; Krawczyk et al., 2015; Marshall et al., 2019; Radisic et al., 2017).

Another barrier to getting the vaccine was concern that the vaccine would not work out in the long run. A participant stated that “it might not work out in the long run scientifically as expected”. Although this was the only participant to discuss the long-term effectiveness of the vaccine, it does align with existing research that showed that some barriers were concerns with how long the vaccine would last and the long-term side effects of the vaccine (see Krawczyk et al., 2015).

### ***Benefits***

Almost all of the participants noted a benefit to receiving the HPV vaccine. A benefit that was addressed the most was cancer prevention. This supports existing research that indicated that the most common benefit of the HPV vaccine parents identified was the prevention of cancer and genital warts (see Galbraith et al., 2019; Krawczyk et al., 2015; Lacombe-Duncan et al., 2018; Mupandawana & Cross, 2016; Ogunbajo et al., 2016; Radisic et al., 2017). My study also supports the existing research as participants also saw protection against sexually related diseases or HPV related diseases (i.e., genital warts) as a benefit of the HPV vaccine (Galbraith et al., 2019; Krawczyk et al., 2015; Lacombe-Duncan et al., 2018; Mupandawana & Cross, 2016; Ogunbajo et al., 2016; Radisic et al., 2017).

However, one participant in my study did not report any benefits to the HPV vaccine and said, “I feel it’s being forced on people and people are coerced into it.” This was different from existing research. Radisic et al. (2017) also mentioned that parents said that the protection of their child’s future partner was also a benefit to getting the

HPV vaccine. Participants in the current study did not indicate that this was a benefit to the vaccine.

### ***Severity***

I looked at parental views about the severity of HPV. A majority of participants indicated that HPV is not severe because they believed that it could be managed with early treatment. However, the few participants that saw HPV as severe indicated that they would vaccinate their child or children. Vu et al. (2019) showed that individuals with a higher perception of the seriousness of HPV were more likely to get the HPV vaccine. The findings from the current study align with this research.

### ***Susceptibility***

In this study, parents were asked about how susceptible they believed their child was to HPV. Many parents indicated that they believed their child or children were susceptible to HPV due to not knowing what their kids get up to these days. The participants that did indicate that they believed their children were susceptible also said that they would vaccinate their child or children. This aligns with existing research from Shapiro et al. (2018) who found that Canadian parents with a high perception of susceptibility were not likely to be nonvaccinators.

This study also showed that participants did not perceive their child or children to be susceptible due to their belief of abstinence and no sex before marriage. One parent indicated that they believed their child had good morals to guide them and that the vaccine would not be a license to be sexually active. These perceptions also align with existing research. Krawczyk et al. (2015) and Galbraith-Gyan et al. (2019) showed that

parents with a view that their child had a low susceptibility were less likely to vaccinate their child because they either believed their child was not sexually active or that their child's morals on abstinence would keep them from becoming sexually active. While some of the participants with a low susceptibility perception indicated they would not vaccinate their child, there were a few participants that said they would vaccinate. One participant that said they thought their child had a low susceptibility said that they would vaccinate their child if their doctor recommended it or if they (the parent) felt okay with the procedure. This shows that some parents may still get their child vaccinated even though they believe their susceptibility is low.

### **Faith Informed Views Towards the HPV Vaccine**

In this study, participants had a few different perceptions about how their faith informed their views on the HPV vaccine. Some of the participants indicated that their faith did not inform their views on the HPV vaccine and did not confuse religion with healthcare. A couple participants said that their faith positively informed their views on the HPV vaccine, while a few stated that their religion was against the vaccine. Those that stated that their religion was against the HPV vaccine also indicated that they would not get the vaccine. Shelton et al. (2013) discussed how parents that attended church regularly were more likely to have negative religious beliefs about the HPV vaccination than parents that did not attend religious services. This aligned with the current research as all the participants in this study indicated they attended church regularly (3-4 times a month) and some participants had highly negative religious beliefs about the HPV vaccine. However, other participants that attended church regularly (3-4 times a month)

indicated that they did not associate religion with their healthcare decisions, which contradicted with what Shelton et al. discovered.

This study also adds to the existing literature as few studies focused on the LDS religion. The one existing research study that did mention the LDS religion specifically indicated that pharmacists from other Christian faiths were more likely to have a positive view about the HPV vaccine than the pharmacists within the LDS religion (Tolentino et al., 2018). While this was true for a minority of the participants in the current study, a majority did not make health decisions based on faith and had a positive view of the vaccine.

## **Parental Attitudes Towards the HPV Vaccine**

### ***Parental Decision to Vaccinate Children***

My results indicated that a majority of participants would vaccinate their children with the HPV vaccine. Their reasons varied from it being beneficial to their health or there was a need for their child to get the vaccine to getting the vaccine because it was either medically necessary or their doctor recommended it. This aligned with existing research. Warner et al. (2017), Sisson and Wilkinson (2019), Vu et al. (2019), and Myhre et al. (2020) showed that a strong provider recommendation led to getting the HPV vaccine while the lack of a provider recommendation prevented vaccine initiation.

Nevertheless, there were a few participants that indicated they would not vaccinate. One participant stated that their religion forbids it and so they would not vaccinate their children. Others indicated that they would not vaccinate due to a lack of

susceptibility, not seeing a need to, or they did not see any danger in not vaccinating their child.

### ***Parental Experiences with the HPV Vaccine***

My results illustrated that most of the participants had no experience with the HPV vaccine. One participant stated that they had no personal experiences with the vaccine but had read a lot of positive reviews about the vaccine. Another participant had not received it and believed the vaccine was “over emphasized” and that they felt there was another agenda behind the vaccine. This extends knowledge in this area as there is not a lot of research that looks at the views or experiences of parents within the LDS religion and this study indicates most of the participants had no experiences with the vaccine.

### **Limitations of the Study**

This study had limitations that could have affected the findings. One of these limitations was conducting email interviews. In using this method, it was difficult to know if the individuals responding were a real person or if they were the same person impersonating someone else. Several responses received from participants at the beginning of data collection were either copied or used the same phrases as another participant. Any responses received that were copied or had the same phrases were excluded from the study. It was assumed that all other responses were truthful and from different individuals that are active members of the LDS religion.

Another limitation was how interviews were conducted. Participants had the choice of how they wanted to be interviewed: in-person (if possible), phone, email, or

Zoom. All but two of the participants opted for the email interview. Emails interview did not allow for me to see the participant to observe body language, interact to gain more information, to determine if they were different people, and if they really lived in the United States. This was another issue with the two participants that opted for a Zoom call. They left their cameras off through the whole interview and one participant would go silent for almost 2 minutes before answering a question. This led to some speculation about whether this participant's answers were their own or not.

Recruitment was also a limitation for this study. I was informed by the LDS church that I was not allowed to recruit within church buildings (i.e., post flyers or address groups) which limited where I could recruit for this specific population. It was also difficult to contact ward Facebook groups about posting on their page, as I never received replies to my requests. Lastly, although the geographic location of where participants live was extended to the whole of the United States, the specificity of the target population could mean the results are not generalizable.

### **Recommendations**

In this study, I explored the perceptions of LDS parents about the HVP vaccine's severity, benefits, and barriers in the United States and how LDS religious beliefs may influence these perceptions. I also explored the susceptibility and cues to action to HPV, and whether parents had any experiences with the HPV vaccine. Very few of the participants had any experiences with the HPV vaccine and most viewed the vaccine in a positive light. However, additional research is needed to further the understanding of these perceptions and overcome the limitations of this study.

Future research could look into the quantitative side of HPV vaccinations among LDS parents. Participants were asked about their experiences and perspectives regarding the HPV vaccine in the current study, but the study lacked the statistics on this topic. Future research should look into how many parents would vaccinate their kids, how many would discourage it's use, how many would recommend it, how many believe the LDS church beliefs or teaching discourage the vaccine, etc. Additionally, future studies should also collect more demographic data on participants, such as age, gender, and the state where they live. Future qualitative studies should also explore the reasons behind the lack of experience with the HPV vaccine when participants in the current study indicated that they would vaccinate their children.

In the current study I conducted interviews mostly through email. Email interviews should be avoided in the future as it is difficult to discern whether the individuals replying are real and different people, if they are answering for themselves, and it is impossible to make any observations. These were a limitation and issue for the current study. Future research should try to limit interviews to in-person and Zoom meetings with the cameras on throughout the interview.

Participants were asked how the LDS religious beliefs influence their views of the HPV vaccine. However, they were not asked if the LDS religion has views about the HPV vaccine and what those views might be. A few participants stated that their religion forbids the use of the HPV vaccine, however the current study did not explore this area further. Researchers in past studies discussed that individuals regularly attending church or practicing religion were less likely to get the HPV vaccine and were against the



vaccine (Bodson et al., 2017; Shelton et al., 2013). However, few researchers focused on the LDS religion and the influence of the teachings of this religion on HPV vaccination rates in their studies. In the future, researchers should explore the teachings and beliefs of the LDS religion and whether the church does in fact forbid the use of the HPV vaccine.

### **Implications**

Most of the participants in this study had a positive view towards the HPV vaccine and based their medical or healthcare decisions on other matters, such as their healthcare provider or doctor. The results also showed that a lack of information and accessibility were barriers to getting the HPV vaccine. Krawczyk et al. (2015) similarly found that a lack of information was a barrier for parents in Canada. These findings could have an impact on positive social change by guiding future interventions and education about the HPV vaccine. Health districts or departments, both state and local, can use these results to improve or guide the information and education they provide to their communities about the HPV vaccine, such as having brochures in their lobbies.

Some health districts or departments also provide immunizations to community members. Adding the HPV vaccine to the immunizations provided can also lead to positive social change as it can be a way to improve accessibility to the vaccine for those that do not have a doctor or live in a rural area where they may have to wait a long period of time to be seen by a doctor due to a limited number of doctors. There are various methods for increasing access to vaccinations. One of the methods is through community engagement programs (see CDC, 2024e). Community engagement programs can include mobile clinics, vaccine drives, and health fairs held locally (CDC, 2024e). The results of

this study can be shared with directors and administrator at a health district or department to indicate the need for adding the HPV vaccine and to move forward in implementing the use of the vaccine. The HPV vaccine could then be added to the list of vaccines being offered at mobile clinics or health fairs that the health districts or departments attend.

Positive change can also come about from these results as they could be used to encourage doctors to talk to their patients about HPV and provide more information whether or not a child or individual is sexually active or planning to become sexually active. The results of this study indicated that some participants would get the vaccine for their children if their doctor advised them to get it. These results show that doctors have a tremendous influence on an individual's healthcare decisions and providing patients with more information about the HPV vaccine, including how to access it, can help increase vaccination rates. Galbraith et al. (2016) also found that African American parents were more likely to accept the HPV vaccination if their health care provider recommended the vaccine.

### **Conclusion**

The purpose of this general qualitative study was to explore how LDS parents perceive the HPV vaccine severity, benefits, and barriers in the United States, and how the beliefs of the LDS religion may influence these views. I also explored the experiences of parents regarding susceptibility to HPV and cues to action to HPV prevention. The theoretical framework used in this study was the HBM. The HBM involves how personal beliefs or perceptions influence health behaviors and how different factors, such as religion, can influence these behaviors (Hayden, 2019; Rosenstock, 1974).

Using the HBM framework, the perceptions of parents in the LDS religion with children between the ages of 9 and 17 years was explored. In this study, I identified benefits, barriers, and perceptions on severity and susceptibility regarding HPV and the HPV vaccine. Benefits that were identified included cancer prevention and protection against sexually related and HPV related diseases. One participant did not mention any benefits at all. Identified barriers included cost, fear of the side effects, lack of information, lack of awareness, lack of accessibility, the effectiveness of the vaccine, and promiscuity or promoting sex before marriage. Perceptions about the severity of HPV indicated that a majority of the participants did not view HPV as being serious or severe, but there were a few that perceived the disease to be severe. Lastly, perceptions about susceptibility to HPV indicated that a majority of the participants believed that their child was susceptible to HPV. This susceptibility ranged from very susceptible to a bit susceptible. However, a few participants did not believe their child was susceptible to HPV.

The HBM is about the experiences of individuals and involves a person's cues to action (Hayden, 2019). With this area of the HBM in mind I looked at the LDS religion's views on sex and how it informs parental views about the HPV vaccine, and parental experiences with the HPV vaccine and parental decisions to vaccinate their child. A majority of participants indicated that the LDS religion's views on sex was that it was meant for wedded couples and couples were to be of the opposite gender or sex. Most participants also indicated that their faith had nothing to do with their healthcare or that their faith informed their views of the HPV vaccine positively. Only a few indicated that

their faith was against the HPV vaccine. I also found that a majority of participants would vaccinate their children either for their child's benefit, if their doctor recommended the vaccine or it was medically necessary, or if there was a need for their child to get the HPV vaccine. Only a few participants mentioned that they would not vaccinate their child because of a low susceptibility perception, their religion, not feeling the need to, and not seeing the danger in not vaccinating. This is similar to past studies where researchers also found that parents would not vaccinate because they believed that the vaccine was not needed and that their child had a low susceptibility to HPV (Galbraith et al., 2016). Despite a majority of participants indicating that they would vaccinate their child, most participants had not had any personal experience with the vaccine. However, the few with experiences with the HPV vaccine reported that it was positive.

Future research is needed to learn more about this topic. The current study lacked quantitative and parental demographic data. This study also left a question of why LDS parents have not utilized the HPV vaccine when a majority expressed a positive view on the HPV vaccine and indicated that they would vaccinate their child. The specific views of the LDS religion about the HPV vaccine should also be explored as there were a few participants that indicated that the LDS religion forbids the use of the HPV vaccine.

The data from this study, when shared with directors and administrators at health departments or districts, could lead to improved interventions and education about the HPV vaccine to the communities. Looking at the barriers indicated in this study, programs and educational materials can be created to address these barriers and correct any misconceptions. Some health districts or departments also provide immunizations to

community members. The findings from this study could help influence the need for providing the HPV vaccine helping to address the concerns with accessibility. From this study, I also determined that doctors have a significant influence on an individual's healthcare decisions. Sharing these findings with physicians and allied health providers could encourage them to share more information with patients about the HPV vaccine. Using these results to improve programs, educational materials, and providing another avenue for acquiring the vaccine can help to improve vaccination rates.

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## Appendix A: Interview Guide

<b>Interview Guide</b>	
<p data-bbox="297 989 480 1024"><b>Introductory</b></p> <p data-bbox="394 1062 537 1098"><b>Statement</b></p>	<ul data-bbox="691 405 1409 1686" style="list-style-type: none"> <li data-bbox="691 405 1409 947">• Hello, I am Natalie Todd, a Ph.D. student at Walden University. Thank you very much for agreeing to let me interview you today. The purpose of my study is to learn about your religion and perspective on the human papillomavirus, or HPV, vaccine for your children. There are no right or wrong answers in this interview. I simply hope to learn about your experiences.</li> <li data-bbox="691 993 1409 1171">• This interview should last no more than 45 minutes. I also want you to know that this interview will be recorded and transcribed. Is this okay?</li> <li data-bbox="691 1218 1409 1396">• Some of your answers may be shared, but your identity will be protected so you cannot be linked to your answers.</li> <li data-bbox="691 1442 1409 1686">• I also wanted to remind you that your participation in this interview is completely voluntary and that you may stop the interview at any time and for any reason.</li> </ul>

	<ul style="list-style-type: none"> <li>• Before we start, I would like to go over the informed consent form again.</li> </ul> <p>Do you have any questions for me?</p>
<b>Interview Questions</b>	
Question 1	<p>Tell me a little about yourself.</p> <ul style="list-style-type: none"> <li>- How long have you lived in the Northwest?</li> </ul>
Question 2	How many children do you have?
Question 3	What are your children's ages?
Question 4	What are your children's genders?
Question 5	How long have you been a member of the LDS church?
Question 6	How often do you attend church on Sundays?
Question 7	What are your perceptions about the benefits of receiving the HPV vaccine?
Question 8	What are your perceptions about the barriers to receiving the HPV vaccine?
Question 9	What are your perceptions about your child's or children's susceptibility to HPV?
Question 10	How severe do you perceive HPV to be?
Question 11	What are your experiences with the HPV vaccine?
Question 12	What are the beliefs of the LDS religion on sex?

Question 13	Why would or wouldn't you vaccinate your child against HPV?
Question 14	How does your faith inform your views of using or not using the HPV vaccine?
<b>Closing Statement</b>	<p>Thank you again for your time for this interview. The answers you provided are important for my study.</p> <p>Do you have any questions for me? Please contact me if you think of any other questions or have concerns. I will be happy to answer all of your questions. Thank you again for taking time out of your day to participate in this interview. I hope you have a great rest of your day.</p>