

¿Por Qué Esperar?: Examining COVID-19 Vaccine Hesitancy and Hispanic Gender Roles in Eastern North Carolina

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ABSTRACT

The SARS-CoV-2 (COVID-19) pandemic impacted members of different communities in the United States at varying rates. Despite displaying strong adherence to safety behavior guidelines, the Hispanic-American community was affected by COVID-19 at a disproportionately high rate. The present study examined a traditional gender role for Hispanic women, *marianismo*, and its impact on the COVID-19 vaccine hesitancy and COVID-19 safety guideline adherence among Hispanic women living in eastern North Carolina. Hispanic female participants over the age of eighteen who reside in eastern North Carolina (N=14) completed a three-part online survey, one section being the Marianismo Beliefs Scale (MBS), which measures adherence to *marianismo*. Although none of the results were statistically significant, there were notable differences in *marianismo* adherence among different demographic groups.

Keywords: *marianismo*, COVID-19, vaccine hesitancy, safety guideline adherence, Marianismo Beliefs Scale (MBS)

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CHAPTER 1: INTRODUCTION

The Hispanic population in the United States reached 62.1 million as of 2020 (Passel, Lopez, & Cohn 2022). The southern United States has had the highest Hispanic population growth in the past four decades; the Hispanic population in nearly all Southeastern states increased by over 100% between 1990 and 2000 (Smith & Furuseth 2004). North Carolina had the largest Hispanic population boom compared to its neighboring Southeastern states, skyrocketing from 76,726 in 1990 to 372,964 in 2000 (a 386% increase). North Carolina is also home to three of the top four southern cities which experienced Hispanic “hypergrowth” during the same decade. Raleigh, Greensboro, and Charlotte saw 1,180%, 995%, and 932% increases in their Hispanic populations (2004). In North Carolina specifically, 33.6% of Hispanic-Americans live below the poverty line compared to 17.2% of the general population (Larsson, Mathews, Torres, & Lea 2017). Hispanic-Americans in North Carolina are also three times more likely than White North Carolinians to be uninsured, and they tend to be older than the national average (9% of the national Hispanic population is fifty years old or older compared to 11% of the North Carolina Hispanic population (2017).

Hispanic-Americans were also disproportionately affected by the COVID-19 pandemic when compared to the general United States population. As of March, 2020, 28.4% of COVID-19 cases were Hispanic patients, despite the fact that Hispanic-Americans only comprise 20% of the total population in the country (Macias Gil et al. 2020). In North Carolina, from March to June, 2020, only 4.2% of non-Hispanic patients had positive COVID-19 tests. Among Hispanic patients, positive COVID-19 tests skyrocketed to 29.9%. However, this does not seem to be associated with pre-existing health conditions (Turner et al. 2021). For example, Hispanic individuals admitted to hospitals with COVID-19 were significantly younger (51 compared to

71, respectively), and European-Americans had higher rates of comorbidities including hypertension, congestive heart failure, and cancer (Nachal et al. 2021). Such indications reveal that cultural beliefs could be impacting this illness.

Medical anthropological research suggests that culture has an impact on medical beliefs and healthcare decisions (Joralemon 2017). Among the Hispanic community, there are two primary gender roles: *machismo* for men and *marianismo* for women. *Machismo* is the expectation for Hispanic men to have a domineering demeanor and demand subservience from those in a lower social position than themselves (Wood & Price 1997). *Marianismo* defines the expectations of a “good Hispanic woman.” According to this principle, a “good woman” should make it her mission to maintain a harmonious family by tending to her home, husband, children, and extended family members (Stevens 1973). These ideals are rooted in Christianity; women are expected to be pious and chaste, and maintain a moral superiority over men but remain subservient to them, just like the Virgin Mary. In 2010, a scale called the Marianismo Beliefs Scale (MBS) was developed to define the exact traits associated with *marianismo* (Castillo et al. 2010). Researchers defined twenty-four components, divided into five categories (being a family pillar, being virtuous and chaste, being subordinate to others, silencing oneself to maintain harmony, and being a spiritual pillar). *Marianismo* has also been associated with negative health outcomes, both physical and emotional. A high “family pillar” score is associated with increased symptoms of depression and overall anger, for example (Nuñez et al. 2016). In a 2008 study, male dominance and subsequent female subservience often prevented women from making decisions regarding sexual encounters, which often facilitated the transmission of HIV (Cianelli, Ferrer, & McElmurry 2008).

Vaccine hesitancy among members of the Hispanic community varies greatly. In a Latin American study conducted before vaccines became widely available to the public, 59% of surveyed participants indicated that, if available, they would take a vaccine. Participants indicated they would wait, on average, 4.3 months. Only 41% of these vaccine-accepting participants reported that they would get vaccinated within two months of becoming eligible to receive it (Argote et al. 2021). In the United States, 28.2% of Hispanic respondents wanted to get the COVID-19 vaccine as soon as it became available to them (Kricorian & Turner 2021). Though a large portion of Hispanic participants indicated that they would not get vaccinated at all (16.7%), this percentage was less than that of both the non-Hispanic White and Black populations. Though half of the surveyed Hispanic participants believed that the vaccine was going to be effective and about 40% believed it was going to be safe, there was still 40% who believed that the vaccine was being produced too quickly (Argote et al. 2021). Once the vaccine was available for a few months, 47% of Hispanic adults had at least one dose, a lower percentage than both non-Hispanic White and Black rates (Hamel et al. 2021). However, the Hispanic population had the highest percentage of unvaccinated individuals who wanted to receive the vaccine as soon as possible. However, many were worried that by going to a vaccine administration site, they may jeopardize their own or a family member's immigration status.

COVID-19 safety behaviors include wearing a mask over one's nose and mouth, keeping a distance of at least six feet away from others, and frequent hand-washing, all of which prevent disease transmission and have been advised at various stages during the COVID-19 pandemic. Studies have shown that race/ethnicity has an effect on adherence to said safety behaviors. For example, Hispanic-Americans were more likely than non-Hispanic White Americans to wear masks in public spaces in early to mid-2020 (Hearne & Niño 2022). Gender also affects safety

guideline adherence. For example, COVID-19 test positivity is higher among Hispanic men than among Hispanic women. Additionally, Hispanic-American women are more likely than Hispanic-American men to wear masks (2022).

Though there is a clear understanding that COVID-19 has affected the Hispanic population at a disproportionately high rate, any potential explanations for this phenomenon are unclear. Given the large body of research that exists pertaining to Hispanic gender roles such as *marianismo* and *machismo*, there was a deficit of literature focusing solely on vaccine status, vaccine hesitancy, or COVID-19 safety guideline adherence based upon gender among the Hispanic population. However, the studies that did exist showed interesting, and often contradictory evidence about Hispanic women's COVID-related behavior and beliefs. The aim of this research was to examine how Hispanic women's adherence to *marianismo* impacted their COVID-19 vaccination status, their COVID-19 vaccine hesitancy and views, and their adherence to COVID-19 safety guidelines. In conducting such exploratory research, the hope is that this better understanding of Hispanic women in North Carolina and their beliefs can allow health officials and policy makers to gain a better understanding of this underserved group and potentially learn how to cater their care to this population. In addition to the two primary hypotheses (Hypotheses 1. and 2. below), five exploratory hypotheses were examined in this research. The seven hypotheses were as follows:

1. Hispanic women with a high adherence to *marianismo* would display increased vaccine hesitancy.
2. Hispanic women with a high adherence to *marianismo* would display increased adherence to COVID-19 safety guidelines.
3. Younger women would display lower adherence to *marianismo* than older women.

4. Unmarried women would display lower adherence to *marianismo* than married women.
5. Women without children would display lower adherence to *marianismo* than women with children.
6. Women with at least some college education would display lower adherence to *marianismo* than women without any college education.
7. Women with higher self-reported vaccine confidence would display lower adherence to *marianismo* than women with lower self-reported vaccine confidence.

The following chapter, Chapter 2, will provide an overview of the demographic information and literature associated with the Hispanic population in North Carolina. There are subsections detailing the origin of the term “Hispanic” and the history of the Hispanic population in the United States including information on traditional gender roles, how the Hispanic population was disproportionately affected by COVID-19, and the intersection between race/ethnicity, gender, and COVID-19 vaccine hesitancy and safety behaviors.

Chapter 3 provides an explanation of the methods of data collection used in this research. In order to find participants, snowball sampling was utilized. The organization, the Association of Mexicans in North Carolina, Inc. (AMEXCAN) played an essential role in establishing a link to members of the local community in Greenville, North Carolina. Participants in this study completed an online survey which consisted of demographic questions, questions concerning their COVID-19 vaccination status and confidence in the vaccine, the Marianismo Beliefs Scale (MBS), and COVID-19 safety behaviors questions.

Chapter 4 is a report of the results of this study. The participants’ demographic information is included first. Responses to questions concerning vaccine hesitancy are included and have been coded for themes and analyzed. Of the participants that completed the MBS, their

scores varied greatly; though most were concentrated around the mean, there were a few outliers in the sample. Their responses were analyzed individually.

Chapter 5 includes a detailed discussion of the study in its entirety. The two primary hypotheses of whether adherence to *marianismo* has a correlation with increased COVID-19 vaccine hesitancy and increased COVID-19 safety guideline adherence are examined.

Additionally, the five exploratory hypotheses and their implications are discussed. The study limitations are addressed, as well as potential future directions for such research.

CHAPTER 2: BACKGROUND

Culture

Nearly every aspect of daily life can be attributed to culture. Broadly, culture can be defined as a shared set of both conscious and unconscious beliefs, ideas, and rules that dictate how members of a group think and act. Culture is dynamic, learned, and shared by members of a society (Hudelson 2004). Though the existence of human culture is universal, culture is incredibly variable; what is considered polite in the context of one culture may be seen as extremely offensive within the context of another. Additionally, the culturally appropriate healing practice or method of disease transmission that is widely believed in varies by culture.

Anthropologists have always been interested in health and the human body. However, these started out as interests exclusive to biological anthropologists who examined human remains and sought to understand how they lived their lives based upon health indicators on their skeleton. In the mid-nineteenth century, cultural anthropologists began demonstrating a true interest in how culture relates to human health, thus giving rise to the field of medical anthropology. The goal of medical anthropology is to determine the impact of culture on health beliefs and practices (Joralemon 2017). In practical settings, medical anthropologists can play a vital role in ensuring that international (or even domestic) healthcare efforts are successful. For example, when working within a group of people who hold a belief that blood is nonregenerative and drawing blood is a “permanent loss of strength,” a medical anthropologist could advise that the team designing or leading the healthcare initiative avoid trying to draw blood from members of this particular group (2017).

There are various theoretical orientations within the field of medical anthropology: ecological, critical, applied, and interpretive (Joralemon 2017). The ecological perspective

primarily focuses on the interaction between sociocultural elements and one's physical environment. Ecological medical anthropologists seek to determine the link between behavior and one's subsistence patterns, health beliefs, lifestyle, etc. There is an emphasis on the process of adaptation within this framework, with a notable focus on how members of different cultural groups respond to their respective environments. Based in Marxist ideas and the notion that the interpretive and aforementioned ecological perspectives should be challenged, the critical perspective examines how wealth, power, and labor affect one's health and healthcare access. Though proponents of the critical perspective approach ecological anthropology with a great deal of scrutiny, utilizing the critical perspective can be helpful (2017). Perhaps the most "practical" of all of the medical anthropology perspectives is applied medical anthropology (2017). If a medical anthropologist acts as a cultural consultant on a healthcare project, or advises researchers on how to make their project better suit the population they want to work with, or helps facilitate a health intervention between healthcare workers and a population with vastly different beliefs towards health than those of the healthcare workers, they are working as an applied medical anthropologist.

This thesis will be operating under the theoretical framework of interpretive medical anthropology. Within this perspective, medical anthropologists attempt to determine how cultural understandings and responses to diseases are shaped by cultural beliefs surrounding the human body, disease transmission, and life itself (Joralemon 2017). Rather than focusing on the biological aspects of a disease, medical anthropologists operating under the interpretive theoretical framework focus on the meaning and interpretation of a disease (Grønseth 2009). For example, examining the cultural syndrome *susto*, a fright illness commonly seen among Latin American people, from a purely biomedical perspective would only allow you to see the patient

and their physical symptoms. A biomedical professional would likely begin their examination of a Hispanic patient presenting with restlessness, anxiousness, and weakness by conducting physical tests such as drawing bloodwork. Their eventual diagnosis and treatment would be based upon the physical examination. However, an interpretive medical anthropological perspective would have numerous advantages in this situation by looking at a broad picture that includes the patient's physical symptoms and their sociocultural beliefs. The anthropologist would take into account the patient's cultural background, and recognize the symptoms the patient was presenting as a representative of the mind-body connection that resides in the traditional Latin American cultural perception of illness. In discovering the underlying cultural meaning of a disease, as is the ultimate goal of an interpretive medical anthropologist, the medical anthropologist could potentially act as a cultural broker in situations where the traditional healer is unavailable (Grønseth 2009).

Within the context of Hispanic populations, the interpretive theoretical orientation allows for the more nuanced interpretation of COVID-19 that accounts for the impact of one's cultural belief system on health. The traditional biomedical interpretation of COVID-19 as a virus that can cause flu-like symptoms and, in extreme cases, difficulty breathing and even death. Through the use of the interpretive theory, one can begin to understand the unique interpretation of COVID-19 among the Hispanic community. For example, COVID-19 affects Hispanic-Americans at disproportionately high rates compared to White Americans. Thus, the way that a Hispanic-American patient may react to news of COVID-19 test positivity for themselves or a loved one would differ greatly from their reaction if the patient were from another racial/ethnic group. Their understanding and interpretation of the COVID-19 vaccine may vary greatly as well.

CHAPTER 3: ETHNOGRAPHIC CONTEXT

Hispanic-Americans: Past and Present

As a preface to this work, it is important to define the terms which will be widely used throughout the thesis: Hispanic. One major challenge for Hispanics, especially those living in the United States, is: what does Hispanic really mean? Before attempting to answer such a question, one must understand the differences between race, ethnicity, and nationality. While physical characteristics are often regarded as “racial markers,” there is no true biological legitimacy to race; within-group differences among individuals account for 93% to 95% of genetic variation while differences between groups only account for 3 to 5%. (Rosenberg et al. 2002). However, race does play a prominent social role. In the United States, we often think of White, Black, Asian, Native American, etc. as racial categories, though these have shifted over time. Ethnicity has its roots in shared cultural traditions, or in some cases, shared geography. Lastly, nationality simply indicates the country with which one is affiliated (Gracia 2005).

A single term to define the Hispanic population in the United States did not exist until the late 1960s. By 1977, the Office of Management and Budget required an item on Hispanic origin to be included in all federally collected data (Massey 2019). Though Hispanic can refer to someone of any racial background who has cultural ties to any of over twenty Hispanic nations, people of Hispanic descent do share enough commonalities to warrant the existence of this “umbrella” term. They share a mix of cultural elements from Spanish, African, and Indigenous American backgrounds, influence from Catholicism, and, most notably, a common language: Spanish.

For some, these similarities form the basis of a united but diverse group. Especially during the civil rights era, a united identity was strongly encouraged, and even today, many

Hispanic festivals and cultural events are held which celebrate the beauty of various Hispanic cultures. However, some argue against the label, stating that attempting to group together people hailing from nearly two dozen nations is inadequate in acknowledging the differences between cultures (Sommers 1991). Having such diversity within a group can also cause ethnic classifications to change over time, which can be especially challenging in a medical context. Health research can be challenging among Hispanic populations depending on how Hispanic is defined in a certain source, how detailed the source is, and whether the source accommodated potential linguistic and cultural barriers (Borak, Fiellin, & Chemerynski 2004).

The Hispanic population in the United States “emerged” following the Mexican-American War in 1846. Seventeen months after the start of the Mexican-American War, the Treaty of Guadalupe Hidalgo forced Mexico to cede all of its land north of the Rio Grande, or the equivalent of 55% of its total territory. As a result, over 100,000 Mexicans became residents of the states of California, New Mexico, Arizona, and Texas in 1850. Following the war, European-Americans very rapidly moved into these formerly-Mexican states. Only New Mexico was able to maintain a significant Hispanic population; in California, only one county maintained a Hispanic population over 5%, likely due in part to the California Gold Rush of the late 1840s and early 1850s (Haverluk 1997).

The European-American desire to rapidly develop land in the Southwest and lack of knowledge of how to do so created new job opportunities for Mexicans and Mexican-Americans. Approximately 700,000 Mexicans immigrated to the United States between 1900 and 1925 (Haverluk 1997). This increase in population also led to an expansion in states of residence; Wyoming, Nebraska, Colorado, and Kansas all saw increases in their Mexican populations. Most came to do farm work, leading to the subsequent creation of migrant communities which

facilitated easier immigration for future generations. By 1930, the Hispanic population of the United States had surpassed 1.6 million, 1.5 of whom were of Mexican descent. This compelled the U.S. Census Bureau to add “Mexican” as a new racial category on the census. Immigration restrictions and repatriation strategy caused the Hispanic population to decline through the 1940s; World War II resulted in labor shortages which caused the United States population to again turn to Mexicans. The United States worked with Mexico to establish the Bracero Program, which guaranteed minimum wage, food, housing, and transportation for migrant workers. During the mid-1950s, nearly 400,000 Mexicans were entering the United States yearly. Many farmers saw illegal immigrants as easier, cheaper labor, and it is likely that illegal Mexican immigrants outnumbered the amount of legal immigrants at the time (1997).

Despite the rapid growth of the Hispanic population in the United States, the American South saw a lack of Hispanic immigrants for many years. Slavery was just ending while the United States was annexing what used to be Northern Mexico, and persistent racist policies kept Black people in more laborious lines of work such as farm work, eliminating the need for Mexican farmworkers. From 1930 to 1960, the Hispanic population in the South only accounted for one percent of the total Hispanic population in the nation. However, there was a sharp increase that took place following 1960; by 1990, the Hispanic population of the South accounted for 10% of the nation’s total (Haverluk 1997). From there, the Hispanic population has grown exponentially. Across all Southeastern states except Florida, the Hispanic population increased by over 100% between 1990 and 2000 (Smith & Furuseth 2004). North Carolina had the largest Hispanic population boom, going from 76,726 Hispanic people in 1990 to 372,964 in 2000, a 386% increase. North Carolina is also home to three of the top four cities which

experienced Hispanic “hypergrowth” during this time. Raleigh, Greensboro, and Charlotte saw 1,180%, 995%, and 932% increases in their Hispanic populations, respectively (2004).

In 2020, the Hispanic population in the United States reached 62.1 million (Passel, Lopez, & Cohn 2022). As of 2022, the average yearly income for a Hispanic household was \$75,193, though the median yearly income was much less: \$55,321 (Current Population Survey). In recent years, the southern United States had the highest percentage of Hispanic population growth; however, household income figures for Hispanics were even smaller than the national averages. The average yearly income was only \$72,504 and the median yearly income was \$51,319. North Carolina has the eleventh-highest Hispanic population in the United States, totaling around 962,665 individuals. In addition to making less than the national average, 33.6% of Hispanic North Carolinians are impoverished compared to the 17.2% of the general population living below the poverty line. Additionally, they are three times more likely to be uninsured than European-Americans. Data has also shown that North Carolina has a slightly older Hispanic population. Though 9% of Hispanics nationally are fifty or older, 11% of Hispanics in North Carolina are above the age of fifty (Larsson, Mathews, Torres, & Lea 2017).

Though our sample population consisted of Hispanic women from eastern North Carolina in a broad sense, many of our participants were recruited and likely reside in Greenville, North Carolina. As of 2020, the population in Greenville was 92,826 (Data USA 2020). Of these 92,826 people, only about 4,110 identify as Hispanic (equivalent to 4.43% of the city’s total population). Greenville is the home of one of the area’s largest community engagement organizations: the Association of Mexicans in North Carolina, Inc., more commonly referred to as AMEXCAN. As stated on their website, AMEXCAN’s mission is to “promote the active participation of Mexicans and Latinos in their new communities and encourage the appreciation,

understanding, and prosperity of the Mexican and Latino community through culture, education, leadership, health, and advocacy,” (AMEXCAN). Though located in Greenville, AMEXCAN serves sixteen different counties across eastern North Carolina. They have six primary initiatives: advocacy, arts and culture, education, binational initiatives, leadership, and community health. AMEXCAN has a long-standing relationship with East Carolina University and its faculty and students; AMEXCAN has a student association at East Carolina University, and they have an internship program established that is exclusive to ECU students.

AMEXCAN also sponsors monthly meetings centered around Hispanic community health through one of their health programs, the North Carolina Latino Health Alliance (NCLHA). In addition to promoting general AMEXCAN health and wellness events, during NCLHA meetings, AMEXCAN staff members meet with representatives of various public and community health organizations across the state and discuss health programs related to a specific topic, which changes every month. Participants are encouraged to spread information about research they are conducting and community events they are holding.

Gender Roles: *Machismo* and *Marianismo*

Traditionally in Latin American cultures, men and women are prescribed one of two dichotomous gender roles. For men, they are expected to have a domineering demeanor, and demand complete subservience of those in lower social positions (Wood & Price 1997). This dominance-based behavior pattern for Hispanic men is called *machismo*. Though this behavior can be observed among male-male interactions, particularly in cases when another man may be disrespectful, attempting to engage with a woman who already had a male partner, or even in male-male sexual relationships, it is most often demonstrated among male-female sexual relationships.

This type of behavior originated during the Spanish colonization of the Americas (Wood & Price 1997). Spanish colonizers often displayed their power over the Indigenous people through violence and theft, stealing any items of perceived value, including women. They would then marry these Indigenous women to display their power over the native people as a whole, and would often have sexual relations with as many women as they pleased simply to demonstrate authority and sexual prowess. *Machismo* can also trace its roots back to the traditional Hispanic view of God, who was viewed to be a powerful tyrant whose unpredictable behavior meant he could destroy or give life as he saw fit (1997). Women's traditional role also has its roots in religion; the Virgin Mary is a highly revered figure in Catholicism, which was brought over to Latin America by the Spanish. Even today, the Virgin Mary is a highly respected figure, and religious iconography depicting her image is quite common in Hispanic countries (Stevens 1973).

Marianismo is the term used to define the traditionally-expected behavior of a Hispanic woman (Stevens 1973). Much like the Virgin Mary, a "good woman" is expected to remain virtuous and chaste, and should be morally superior to their rash and brutish male counterparts. Women are expected to be the spiritual leaders in the family, and should maintain her home, husband, and children in both a physical and spiritual sense. They should put their own wants and needs aside in favor of those of her family members. Though part of that subservience is satisfying her partner's sexual needs, this should only be done after marriage. Though such behavior is accepted and borderline encouraged among men, women who have premarital or extramarital sexual relationships are viewed as sinful and shameful (Wood & Price 1997).

In 2010, psychologist Linda G. Castillo and her team developed the Marianismo Beliefs Scale (MBS), included in the appendix, a scale established to define traits associated with

marianismo and quantify adherence to such concepts (Castillo et al. 2010). Through responses from their Mexican-American survey participants, the researchers narrowed their original list of 75 components down to 24, which are divided into five categories. These five categories are being a family pillar, being virtuous and chaste, being subordinate to others, silencing oneself to maintain harmony, and being a spiritual pillar.

Past research has associated certain components of *marianismo* with negative cognitive-emotional factors and health outcomes. A higher score on the family pillar category was associated with increased symptoms of depression and overall anger, and a higher score on the spiritual beliefs category was associated with increased symptoms of anxiety and angry temperament (Nuñez et al. 2016). Gender roles have also been shown to have an impact on other health outcomes, such as acquisition of human immunodeficiency virus (HIV). In a study among Chilean participants, male dominance often prevented women from making decisions before or during sexual encounters that could prevent HIV transmission (Cianelli, Ferrer, & McElmurry 2008).

COVID-19 Among Hispanic-Americans

Despite only comprising one-fifth of the total population, Hispanic-Americans have been affected by COVID-19 at disproportionately high rates; Hispanic individuals represented 28.4% of United States COVID-19 cases as of March 2020 (Macias Gil et al. 2020). It is important to note, however, that this is based on limited data. Nearly half of all early COVID-19 reports published by the Centers for Disease Control and Prevention lacked data pertaining to race or ethnicity (Martínez, Nodora, & Carvajal-Carmona 2021). 45 states had published race/ethnicity data as of May 2020, and only 31 of those states included any data about the Hispanic

population. Nevertheless, the proportion of COVID-19 cases among Hispanics vastly outweighed the proportion of Hispanic residents in 87% of these states (Macias Gil et al. 2020).

When examining the characteristics of affected Hispanic individuals, on average, Hispanic-American individuals admitted to the hospital with COVID-19 were nearly 20 years younger than European-Americans (51 vs. 70 years old). Though Hispanic-Americans had a slightly higher median body mass index (BMI), European-Americans had higher rates of comorbidities including hypertension, congestive heart failure, and cancer. Only end-stage renal disease (ESRD) rates were higher among Hispanic-Americans than European-Americans (Nanchal et al. 2021).

In North Carolina specifically, researchers examined demographic characteristics of hospital and outpatient facility patients' records from March to June 2020. Of the non-Hispanic individuals, only 4.2% had positive COVID-19 tests. Among Hispanic individuals, this number skyrocketed to 29.9%. There was a notable increase in the proportion of different racial and ethnic groups' COVID-19 test positivity during the same time period. While the rates were nearly identical for White-, Black-, and Hispanic-Americans during April 2020, the test positivity rates for the Hispanic population greatly increased from May to June. The rates for White and Black Americans remained fairly consistent, dipping slightly in May then rising back to April's proportions in the following month (Turner et al. 2021).

Vaccine Hesitancy Among Hispanics and Hispanic-Americans

Latin American countries lead the world in deaths related to SARS-CoV-2, commonly referred to as COVID-19. As of April 12, 2021, Brazil (2nd place), Mexico (3rd), Colombia (11th), Argentina (13th) and Peru (15th) all ranked within the top 15 nations globally with the most COVID-related deaths (Urrunaga-Pastor et al. 2021). Nevertheless, it remains vastly

understudied compared to other regions. In a recent review of COVID-19 vaccine hesitancy studies examining data from 33 countries, only two were located in South America (Sallam 2021). Ecuador and Brazil had some of the highest vaccine acceptance rates, 97% and 85.4%. The study had some flaws, the most apparent being the decision to include studies conducted exclusively in English. For most Latin American countries, this language barrier disqualifies many potential participants, namely those with less access to education such as members of indigenous communities.

Before COVID-19 vaccines became widely available to the public, about 10,000 participants from Argentina, Brazil, Chile, Mexico, and Peru were asked to respond to questions concerning their likelihood to receive a COVID-19 vaccine (Argote et al. 2021). 59% of participants indicated that, if available, they would take a vaccine. However, these participants stated they would wait, on average, 4.3 months to do so. Of these vaccine accepting participants, only 41% indicated they would get vaccinated within two months of becoming eligible. In addition to overall vaccine acceptance, this study examined five contributing factors. Participants displayed a strong preference for western-produced vaccines such as Pfizer, which reflected overarching international relations. Vaccine efficacy and community uptake both had a positive correlation with willingness to get vaccinated. Endorsements from medical organizations rather than religious or political leaders seemed to have the most profound impact on vaccine acceptance.

A variety of factors may impact someone's likelihood to receive a COVID-19 vaccine, such as gender, socioeconomic status, and age. In a study including participants from 20 Latin American and Caribbean countries, in comparison to males, females and non-binary individuals demonstrated lower vaccination intent and higher fear of adverse effects (Urrunaga-Pastor et al.

2021). Residents of villages and rural areas were less likely to indicate vaccination intent compared to residents of cities and urban areas. Similar to the aforementioned study, results indicated that recommendations from local medical professionals, government health officials, and the World Health Organization are associated with higher rates of vaccination intent. Recommendations from family and friends yielded similar results. One of the principal shortcomings of this survey is that, because it was conducted online, it favors those with internet access. Though the majority of participants reported food and/or economic insecurity, 79.4% of the study participants live in cities, increasing their likelihood to find a way to access a computer. Those who live in more remote, rural areas would have a much more difficult time completing this survey, which may be to blame for their underrepresentation in the study.

A January 2021 survey found that 28.2% of Hispanic respondents in the United States wanted to get the COVID-19 vaccine as soon as it became available to them (Kricorian & Turner 2021). This percentage was less than that of White Americans, but higher than that of Black Americans. Though the percentage of Hispanics who reported that they did not intend to get vaccinated at all (16.7%) was less than that of both White and Black respondents, it still indicated that a significant portion of the Hispanic population had reservations concerning the COVID vaccine before it became widely available. Despite the fact that about half of the surveyed Hispanic participants believed that the vaccine was going to be effective and approximately 40% believed it was going to be safe, there were still hesitant respondents. About 40% believed that the vaccine was being produced too quickly.

A few months after the COVID-19 vaccine became available to the public, another study found that 47% of surveyed Hispanic adults had received at least one dose (Hamel et al. 2021). Although the percentage of vaccinated Hispanic adults was less than the percentages of both

vaccinated White adults and vaccinated Black adults, Hispanics had the lowest percentage of unvaccinated adults who reported that they would “definitely not” get vaccinated and the highest percentage of unvaccinated individuals who wanted to receive the vaccine as soon as possible. Among the Hispanic adults surveyed, there were a few differences in vaccination intent among members of different demographic groups. Adults over the age of 50 were much more likely than adults 18 to 49 to have already received one dose of the vaccine. Affiliation with the Democratic party increases the likelihood of an adult to have received at least one dose of the COVID-19 vaccine. College-educated adults were more likely than adults without a college education to be vaccinated. Men and women were almost equally as likely to have received at least one dose of the vaccine (46% and 49%, respectively).

There were a few barriers that unvaccinated Hispanic adults cited. For example, immigration status was a concern for both U.S.-born and foreign-born Hispanics. The possibility of being asked to provide government-issued identification or a social security number was a concern for four in ten Hispanic adults (Hamel et al. 2021). 35% worried that getting a COVID-19 vaccination could potentially negatively impact their own immigration status or that of a family member.

Gender and COVID-19 Safety Guidelines

Race and ethnicity have had a demonstrated impact on adherence to mask-wearing guidelines. Compared to White American participants, from April to June 2020, Hispanic-American individuals were more likely to wear masks when in public spaces (Hearne & Niño 2022). Hispanics were more likely than European-American men to wear masks, though there were some important gender differences. In the previous study, researchers noted a slightly higher proportion of COVID-19 test positivity among men; only 6.1% of females tested positive,

8.4% of males tested positive (Turner et al. 2021). These results are consistent with those of Hearne and Niño's study, which concluded that males are less likely than females to wear masks. While all Hispanic-Americans were more likely to wear masks than White men, Hispanic-American women were more likely than Hispanic-American men to abide by mask-wearing mandates (Hearne & Niño 2022).

Regarding the holiday season during the early months of the COVID-19 pandemic, Hispanic-Americans were less likely than non-Hispanic White Americans to gather with people outside of their households during both Thanksgiving and the winter holidays (ex. Christmas, Hanukkah, etc.) (Peacock Jr. et al. 2022). Women were also less likely to gather with non-household members during both holidays than men. These behaviors appear to go against the collectivistic tendencies of Hispanic families; especially during holidays, the tendency is to gather with members of the extended family who live outside of the home. However, especially for Hispanic women, this adherence to the COVID-19 safety guidelines could indicate adherence *marianismo*; following recommendations from government agencies on a larger scale, or even family members on a smaller scale, could be indicative of subservience to an authority figure or organization.

The COVID-19 pandemic has affected minority groups, namely Hispanic-Americans, in the United States at disproportionate rates. There are demonstrated differences in COVID-19 test positivity rates among Hispanic-Americans and European-Americans (Macias Gil et al. 2020; Turner et al. 2021). Though researchers have observed differences in COVID-19 safety guideline adherence, including mask-wearing, among Hispanic men and women, no study has examined the effect of traditional Hispanic gender roles, such as *marianismo*, on COVID-19 safety guideline adherence including mask-wearing and vaccine acceptance.

Marianismo has been linked to negative cognitive-emotional factors and health decisions among Hispanic women. Higher adherence to *marianismo* has been linked to increased feelings of depression, anger, and anxiety (Nuñez et al. 2016). During sexual encounters, adherence to traditional gender roles often prevents women from making decisions or voicing their opinions, leading, in some cases, to the transmission of STIs such as HIV (Cianelli, Ferrer, & McElmurray 2008). This knowledge of the interaction between *marianismo*, health outcomes, and decision-making was used in the development of Hypothesis 2: Hispanic women with a high adherence to *marianismo* would display increased adherence to COVID-19 safety guidelines. In previous studies, Hispanic-American women demonstrate higher rates of safety guideline adherence such as mask-wearing and limiting interaction with non-household members during the holiday season than Hispanic-American men (Hearne & Niño 2022; Peacock Jr. et al. 2022). Thus, it may be reasonable to assume that there may be a link between adherence to gender roles and COVID-19 safety guideline adherence.

There have been demonstrated gender differences between Hispanic men and women and their COVID-19 test positivity rates, vaccination rates, and reported vaccine hesitancy. More specifically, there is evidence that Hispanic women and non-binary people have higher fear of adverse reactions to the COVID-19 vaccine and lower rates of vaccination intent (Urrunaga-Pastor et al. 2021). In combination with the fact that Hispanic-American women have lower rates of COVID-19 test positivity, it is reasonable to assume that there is a cultural reason behind avoidance of the COVID-19 as a means of COVID-19 prevention. Hypothesis 1: Hispanic women with a high adherence to *marianismo* would display increased vaccine hesitancy, was developed as a result of this aforementioned knowledge. To date, there have been no studies conducted that examine how adherence to *marianismo* affects Hispanic women's

health decisions regarding the COVID-19 vaccine or safety behaviors. The Hispanic population in the United States, especially North Carolina, has been rapidly increasing over the past few decades. Exploratory research such as the present study can assist healthcare professionals and community health workers in their understanding of Hispanic culture and how culture impacts the medical decisions of their Hispanic patients.

CHAPTER 4: RESEARCH METHODOLOGY

In order to recruit our first informants, I reached out to professor emeritus at East Carolina University, Dr. Holly Mathews. Dr. Mathews has been conducting ethnographic research since 1982, specifically research regarding traditional Hispanic medicine and gender roles. Dr. Mathews was able to provide a number of local organizations with which I could potentially work in order to find informants. I established a connection with the Association of Mexicans in North Carolina, Inc. (AMEXCAN). Based in Greenville, North Carolina, AMEXCAN's mission is to inform members of the local Hispanic community of the programs, services, and resources that are available to them. For example, AMEXCAN operates a number of their own programs in areas such as civic engagement, education, arts, and health. AMEXCAN also maintains partnerships with nearly a dozen partner organizations, and frequently hosts meetings in which partners and community members are all encouraged to attend.

I had the privilege of working with AMEXCAN partners Ms. Nathalia Figueroa-Bernal, Director of Operations and health programs coordinator, Ms. Marlene Castillo, Director of Community Development, and Ms. Bianca Perez, Director of Community and Cultural Affairs. Through their organization, they were able to spread the survey to other employees and community members. They also provided me with the opportunity to present at one of their monthly North Carolina Latino Health Alliance (NCLHA) meetings. During this meeting, I shared information about my research and invited any eligible parties to complete and distribute the survey. A few attendees such as Emmanuelle Quenum, Health Education Director for the Greene County Department of Public Health, and Perla Nunes, Director of Community Health Outreach for the Julius L. Chambers Biomedical Biotechnology Research Institute at North

Carolina Central University, reached out directly following the meeting. Such attendees were emailed copies of the PowerPoint slides presented at the meeting, my original thesis proposal, and a PDF file of the survey flier, which included eligibility criteria and the link to the survey, so that they could distribute it at their respective organizations (Appendix C).

For the project, I utilized two sampling strategies: purposive sampling and snowball sampling. Purposive sampling involves selecting participants on the basis of characteristics they possess that are necessary for the research being conducted (Bernard 2017). There were three eligibility criteria for this study: all participants had to be over the age of eighteen, all participants had to identify as women, and all participants had to be a woman of Hispanic origin living in eastern North Carolina. These criteria were selected because the gender role being analyzed is one exclusive to Hispanic women. By only including Hispanic women from eastern North Carolina, place of residence was a controlled variable, and the study results could both apply to the local community and be generalized to the broader Hispanic-American population.

Snowball sampling describes the process of finding a group of key informants who are known to have significant knowledge of the topic at hand, allow them to complete the survey, and then ask them to either send contact information to more people who may be interested in participating in the research, or have them provide the contact information of potential informants (Bernard 2017). One benefit of using snowball sampling is that it eliminates potential bias caused by only selecting informants associated with one organization. Snowballing casts a wider net on the community via interpersonal connections, creating a sample that is more representative of the broader population of interest.

My original target sample size was thirty individuals. Interviewing thirty individuals would have allowed me to obtain data from a demographically-varied group of people. Data

from more participants likely would have contributed positively to the study. Unfortunately, due to time constraints and lack of response from many community members and organizations I attempted to contact, I was only able to survey 14 people. The small sample size presented its own set of unique challenges, which will be explained in more detail in the discussion section. My sample was also small due to the demographic criteria required for potential informants. Participants were required to be over the age of eighteen, and to identify as a woman of Hispanic ethnicity. Since I was examining a Hispanic gender role exclusive to the female section of this population, I limited the study participants to only women. Including the male perspective on COVID-19 vaccinations, COVID-19 safety behaviors, and male gender roles such as *machismo* could expand on the findings of the current research through future studies.

The survey was designed online in Qualtrics and consisted of 37 items. The survey was broken down into three sections: demographics, a semi-structured survey, and a structured survey. Originally, the plan was to include a free-list activity before the structured survey portion in which participants would have one minute to list any words or phrases that they associate with “COVID-19.” They would then have another minute to list words or phrases they associate with “COVID-19 vaccine.” I would have then taken all of the participants’ responses and recorded the frequency of certain words or phrases in the responses of the entire sample. I also originally planned to conduct the interviews in person rather than asking participants to fill out a survey online. The shortened time frame meant that in-person interviews and the scheduling, recording, and transcription associated with them would not have been feasible. Though the switch to an online format was an unexpected change to the original study design, it may have yielded more honest results. Because participants did not have to respond to the questions asked by an interviewer in-person, it eliminated the possibility of participants giving what they thought the

“right” answer was or what they believed the interviewer wanted to hear, a phenomenon referred to as the social desirability effect (Bernard 2017).

Participants first reported their demographic information. I included questions pertaining to age, gender identity, marital status, number of children, and years of education. Gender identity, marital status, and years of education were multiple choice responses while number of children and age were both fill-in-the-blank responses. Though the ultimate goal was to assess adherence to certain gender role beliefs and how they impact vaccine hesitancy and safety behavior adherence, I chose to analyze these demographic variables because of the additional insight they could provide. Many of the previous studies examined factors such as age and education level and their impact on participants’ behavior and beliefs, but very few examined all five independent variables that were included in the present study.

Participants were then administered the Marianismo Beliefs Scale (MBS). Developed in 2012, the MBS uses 24 items to measure participants’ adherence to the five pillars of the traditional Hispanic gender role, *marianismo* (Stevens 1973; Castillo et al. 2012). The pillars of *marianismo* are “family,” “virtuous and chaste,” “subordinate to others,” “silencing self to maintain harmony,” and “spiritual,” (2012). Permission to use the MBS was obtained from the original author, Dr. Linda G. Castillo, educational psychology professor at Texas A&M University. The minimum score on the MBS is a 24; the maximum is 120. Agreement with each of the twenty-four statements was measured on a Likert scale; participants were asked to rank their agreement with the statements on a scale from one to five, one being “strongly disagree” and five being “strongly agree,” (For example: On a scale of one to five, one being strongly disagree and five being strongly agree, please rate your level of agreement with each statement:

A good woman should be the spiritual leader of the family) (see Appendix A. Marianismo Beliefs Scale (MBS) Items).

The semi-structured portion of the survey consisted of two types of questions: questions related to COVID-19 vaccination status, vaccine confidence, and attitudes towards the vaccine; and questions about adherence to COVID-19 safety behaviors such as mask-wearing, hand-washing, and social distancing. Responses to vaccine questions were measured on a rating scale (ex. “How confident in the COVID-19 vaccine’s efficacy are you on a scale from one (not at all confident) to ten (extremely confident)?”), allowing us to quantify hesitancy. Responses to safety behavior questions were measured on a five-point Likert scale ranging from “never” to “always” to measure the frequency of select behaviors (ex. “How often do you make a conscious effort to maintain a social distance of six feet between yourself and another person in a public space?”).

I examined a number of variables in the data analysis. The independent variables included the participants’ scores on the MBS and their demographic information (age, number of children, years of education, marital status, vaccine confidence). The dependent variables examined were vaccine hesitancy, determined through questions such as vaccine confidence and the amount of time participants waited to receive a COVID-19 vaccine, and adherence to COVID-19 safety protocols, which was determined by creating a cumulative COVID-19 safety behaviors score based on three behaviors (maintaining a distance of six feet away from others in public spaces, regularly washing one’s hands, and wearing a mask in public, indoor spaces). The relationships between participants’ demographic information and their MBS scores were also examined. By conducting such analyses, I was able to determine if there was a particular variable that seemed to affect participants’ adherence to *marianismo*. To analyze the quantitative data

obtained from the demographic information and MBS score, I conducted independent sample t-tests. The t-tests were conducted to examine the relationships between participants' MBS score and the variables of age, number of children, marital status, years of education, and vaccine confidence, making a total of five t-tests.

CHAPTER 5: RESULTS

There were fourteen total participants in the present study. As explained in the previous chapter, the survey was divided into three sections: demographic information, a semi-structured portion which consisted of questions related to COVID-19 vaccine hesitancy and COVID-19 safety behaviors, and the Marianismo Beliefs Scale (MBS).

Table 1. Demographic Information

	Mean	Median	Mode	Number of Respondents
Age	30	23.5	21; 23; 37	12
Years of Education	14.7	14 (some college)	14	14
Marital Status			Single	14
Number of Children			0	14

Per the eligibility for participation criteria, all participants were Hispanic women over the age of 18 years old. The participants ranged in age from 20 to 58 years old with the average age being 30 years old. Two participants declined to report their age, which was not factored into the average. All fourteen participants reported that they identify as female. Participants were not asked to report their race/nationality/ethnicity. Half of the participants (50%) reported that their marital status was single. 21.4% reported that they were unmarried, but lived with their partner and 28.6% reported being currently married. Of the fourteen participants, nine reported that they did not have children (64.3%). One participant reported having one child (7.1%), three participants reported two children (21.4%), and one reported four children (7.1%). Most of the participants were college-educated, with twelve out of fourteen participants having varying

levels of college education. 42.9% reported having some college education, 35.7% reported receiving a four-year degree, and 7.1% reported earning a professional degree. Only two of the participants (14.3%) reported that their highest level of education was high school (Table 1).

Table 2. On a scale from 1 to 10, 1 being not at all confident and 10 being extremely confident, how confident are you in the effectiveness of the COVID-19 vaccine?

Confidence	Frequency	Percent
1.0	1	8.33
6.0	3	25.0
7.0	1	8.33
8.0	2	16.67
9.0	1	8.33
10.0	4	33.33
Total	12	100.0

Table 3. Approximately how long after the vaccine became available did you wait to get vaccinated?

Wait Time	Frequency	Percent
Less than one month	2	14.3
1-3 months	1	7.1
4-6 months	2	14.3
7-9 months	3	21.4
10-12 months	1	7.1
More than one year	4	28.6

I am not vaccinated	1	7.1
Total	14	100

Nearly all of the participants in this study were vaccinated for COVID-19. Thirteen participants (92.9%) reported being vaccinated while only one participant (7.1%) reported that they were unvaccinated. While mostly united in vaccination status, the participants' responses varied greatly in terms of confidence in the vaccine's efficacy (Table 2). Ranked on a scale from not at all confident (one) to extremely confident (ten), participants averaged a score of 6.5 in their confidence in the effectiveness of the COVID-19 vaccine. The individual scores were highly variable, ranging from one (8.3%) to 10 (33.3%). Most participants (61.5%) chose to wait more than six months before getting their vaccine once it became available to them, with only 38.5% waiting six months or less (Table 3).

Table 4. Were there any external forces (ex. opinions of family members/friends, workplace regulations, organizational endorsements, etc.) that influenced your decision to get vaccinated/to not get vaccinated? If yes, please list these influences.

Theme: Family

Response	Frequency
Family/Family members	3
Opinions of family members	1
Total	4

Participants were asked if they were influenced by any external forces such as opinions of family members or friends, workplace regulations, organizational endorsements, etc. that influenced their decision to either receive or not receive the COVID-19 vaccine (Tables 4

through 7). Of the twelve participants that responded, four reported that the opinions of their family members influenced their decision. Three respondents mentioned their job had an influence on their vaccination status, one of whom works in clinical research and participated in a COVID-19 vaccine trial. One participant cited that negative remarks made by religious leaders affected their decision, and two reported travel as an influence on their decision. Two participants responded that they were not influenced by external forces, and two participants declined to respond.

Out of all four of the themes from our participants' responses, family was the most common. This is likely due to the fact that, compared to other ethnic groups in the United States, Hispanic-Americans display collectivistic tendencies (Rinderle & Montoya 2008). In addition to the more general emphasis of group needs over one's own, Hispanic-Americans also display high familism. Similar to collectivism, familism emphasizes relationships, deference to other group members, and making decisions for the good of the community, but is more specific to the context of the immediate and extended family circles (2008). This principle was demonstrated in this subsection of our data. The respondent who reported that the "opinions of family members" influenced their vaccination decision demonstrated deference to their family members' beliefs concerning the COVID-19, and this played a notable role in the participant's current vaccination status. Though the three respondents who gave either "family" or "family members" were not specific in what role their family members played in their decision to get vaccinated, it is clear that their family members had a significant influence on their decision-making process.

Table 5. Were there any external forces (ex. opinions of family members/friends, workplace regulations, organizational endorsements, etc.) that influenced your decision to get vaccinated/to not get vaccinated? If yes, please list these influences.

Theme: Travel

Response	Frequency
Yes. I was moving from NYC to NC. I did not want to have any issues boarding the [plane].	1
I wanted to go on a cruise and needed to be vaccinated.	1
Total	2

In contrast to the responses to the previous theme, family, the both responses within the travel theme seemed to reflect more individualistic tendencies. The first participant, who was moving from New York City to North Carolina, was not required to get vaccinated to board the plane. However, they stated that they did not want to have any issues, reflecting that their motivation for getting vaccinated was for their own personal convenience. Rather than getting vaccinated for the good of the people around them or due to the influence of their family or an authority figure, the second participant wanted to embark on a trip that is sought out by individuals for personal pleasure and gain. Getting vaccinated was the best option for protecting the people who would soon be in close quarters with one another, but rather than get vaccinated on their own accord in order to protect other travelers, the respondent was abiding by regulations for personal gain.

Table 6. Were there any external forces (ex. opinions of family members/friends, workplace regulations, organizational endorsements, etc.) that influenced your decision to get vaccinated/to not get vaccinated? If yes, please list these influences.

Theme: Religion/Politics

Response	Frequency
I was hesitant to get the vaccine at first due to the opinions of religious leaders. For example, it contained the chip or it was the "mark of the beast"	1
I am a democrat	1
Total	2

Hispanic culture has strong ties to religion. More specifically, colonial ties to Catholicism have instilled a deep sense of religiosity among many Hispanics and Hispanic-Americans. For example, Hispanic-Americans have a stronger affinity for prosperity gospel and belief in miracles than any other ethnic group, likely rooted in the efforts of many Hispanics to work towards a more prosperous, fortunate future for themselves and their families, an effort which often involves perseverance and faith in eventual prosperity (Jung, Scheiman & Ellison 2016). Similar to the deference towards elders and other family members commonly seen in Hispanic familism, reverence of the opinions of religious leaders is quite common among Hispanic-Americans.

The second response of “I am a democrat” is a clear reflection of our political climate. Recent findings have suggested that not only are Republicans less likely than Democrats to report intent to receive the COVID-19 vaccine, but they are also less likely to report vaccine intent when they view the vaccine as being high in polarity (Dolman et al. 2022). If they view the

vaccine as more of a polarizing political issue than a matter of public health and safety, Republicans are even less likely to receive the vaccine. Being a Democrat is one potential indicator of being more likely to get vaccinated against COVID-19 and, likely due to media coverage, the politicized nature of the vaccine has made people believe that Democrats are automatically pro-vaccine while Republicans are seen as anti-vaccine.

Table 7. Were there any external forces (ex. opinions of family members/friends, workplace regulations, organizational endorsements, etc.) that influenced your decision to get vaccinated/to not get vaccinated? If yes, please list these influences.

Theme: Employment

Response	Frequency
Work made it mandatory from the start.	1
In order to be employed at my current job, vaccination was required.	1
I work in clinical research so I'm an advocate! I actually participated in the Janssen COVID-19 vaccine clinical trial.	1
Total	3

Participants were asked whether they encouraged people close to them such as their family members and friends to get vaccinated, and give their reasons why (Tables 8 through 10). Of the three participants that did not encourage the people close to them to get vaccinated, two cited doubts about the vaccine's safety/efficacy and one simply stated it was a matter of personal choice. Of the eight participants who did encourage others to get vaccinated, a variety of reasons were given. Most wanted their loved ones to stay healthy, many cited the health and safety of the

general public, and some reported a need for trust in the science of the vaccine. One participant did not provide any reasoning. Three participants declined to respond.

Table 8. Have you encouraged the people close to you (ex. family members, friends, coworkers, etc.) to get vaccinated? If yes, why? If no, why not?

Response: Yes; Reason: Education

Response	Frequency
Yes, although I was [hesitant] at first I am now more educated on how important it is after seeing covid [firsthand].	1
Yes, because we need to trust the science!	1
Total	2

Two of the responses emphasized the importance of education and trust in the science behind the vaccine. Both misinformation and mistrust were considerable barriers to widespread COVID vaccination, especially when the vaccines were first made widely available to the public. One of the participants noted that they saw the effects of COVID-19 firsthand. While it is impossible to know whether they meant that they had COVID-19 or a loved one was afflicted, seeing the impact of such a disease on those around them gave them experience with the disease and made them realize how important vaccination is. The second response is an outright rejection of any hesitations towards the COVID-19 vaccine because of the science. Many were worried that it was produced too quickly to be safe, but this participant clearly has faith in the authority figures who produced the vaccine and, consequently, the vaccine itself.

Table 9. Have you encouraged the people close to you (ex. family members, friends, coworkers, etc.) to get vaccinated? If yes, why? If no, why not?

Response: Yes; Reason: Public Health

Response	Frequency
Yes- It is important to the health of the people in my life and the public.	1
Yes, due to the opportunity to do more and stay healthy.	1
Yes, as a preventative measure.	1
Yes, I did [not] want them to suffer.	1
Yes, I motivate my family members and friends who are Hispanic to get vaccinated. I also host farmworker and health fairs where COVID-19 vaccinations are offered.	1
Total	5

Of the participants who responded that they have encouraged the people close to them to get the COVID-19 vaccine, the above five responses demonstrated high adherence to collectivism and familism in their responses. Statements such as “it is important to the health of the people in my life and the public” and “I did not want them to suffer,” for example, are indicative of a concern for the health of family members and the broader general public. As mentioned previously in the discussion of the results of Table 4, Hispanic-Americans have more collectivistic tendencies than the broader American population. They also place a strong emphasis on familism, or the tendency to prioritize family relationships, deference to other group members, and making decisions for the good of the community (Rinderle & Montoya 2008). The first two responses indicated a concern not only for the family members who the participants

were encouraging to get vaccinated, but the concern for other people and the general public as a whole. The fifth response followed this trend, as this participant takes an active role in the community encouraging others to get vaccinated and providing them with the opportunity to do so. Two of the participants specifically stated that they encouraged their loved ones to get vaccinated so they did not contract COVID-19 and suffer as a result.

Table 10. Have you encouraged the people close to you (ex. family members, friends, coworkers, etc.) to get vaccinated? If yes, why? If no, why not?

Response: No

Response	Frequency
No, I feel as if the vaccine was put out too quickly to be safe.	1
No, I believe that it is people’s personal choice.	1
No. I don’t believe in the vaccine.	1
Total	3

In stark contrast to the responses above, all of the participants who reported that they did not encourage the people close to them to get vaccinated either indicated mistrust in the science behind the vaccine or gave responses indicative of more individualistic beliefs. One common sentiment among those who were against the COVID vaccine following its initial release was that it was developed “too quickly to be safe.” Despite all of the data and studies that were published later about the safety of the vaccine, the time frame continued to be worrisome for certain people. Another statement that many people who did not wish to be vaccinated reported was that vaccination was “people’s personal choice.” Those with a more collectivist mindset

view vaccination as an opportunity to protect their loved ones or benefit the general public. In contrast, people with an individualistic mindset tend to believe they should not be forced to receive an injection against their will or be forced to make a choice they do not want to make.

Table 11. COVID-19 Safety Behaviors Score

	Average	Median	Mode
Hand-washing	3.5	4 (6+ times per day)	4
Social Distancing	2.83	3 (Sometimes)	3
Mask-wearing	1.83	2 (Rarely)	2
Cumulative Safety Behaviors Score	8.17	8	8

Participants were assigned a COVID-19 safety behaviors score based upon their reported frequencies of three behaviors: hand-washing, social distancing, and mask-wearing (Table 6). Hand-washing frequency was ranked from one (zero to one times per day) to four (six or more times per day). Both social distancing and mask-wearing were ranked on a scale from one (never) to five (always). The lowest possible total COVID-19 safety behaviors score is three; the highest is 14. Of the 12 participants that responded to this portion of the survey, their average score was 8.17. The median and mode scores were both eight. Participants generally ranked highest on the hand-washing question, with the average score being 3.5 and the median and mode scores being four, indicating participants are washing their hands six or more times per day. Reported mask-wearing behavior was infrequent. Participants only averaged 1.83 for mask-wearing, and the median and mode scores were both two, indicating mask-wearing is rare among participants.

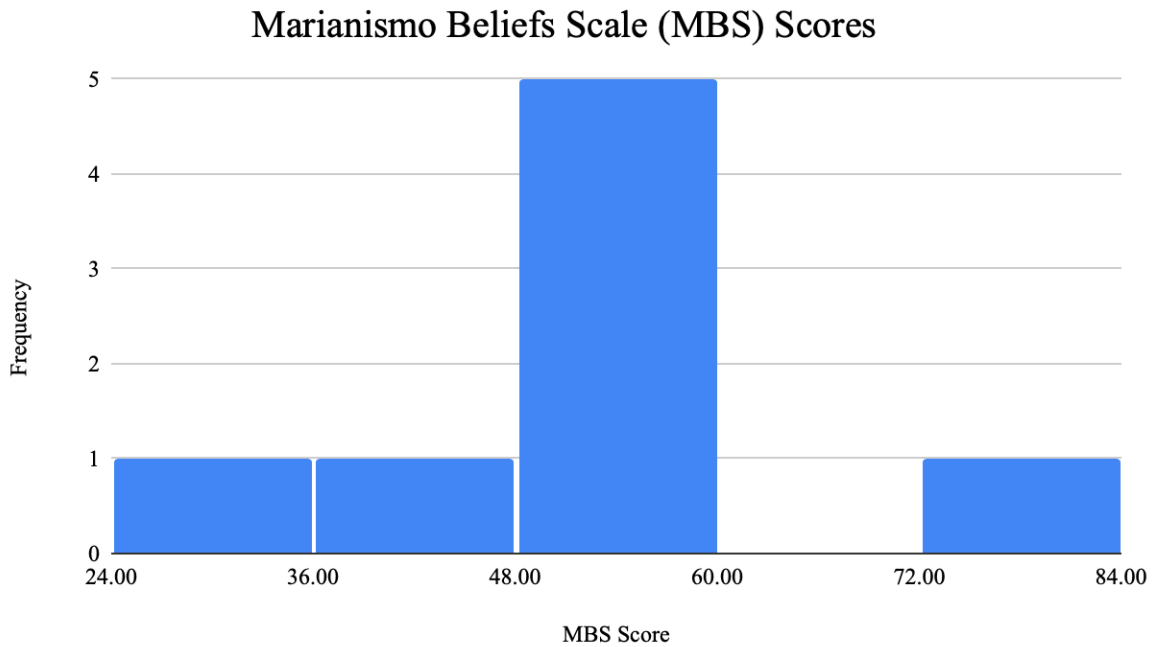


Figure 1. Marianismo Beliefs Scale (MBS) Score Distribution

The Marianismo Beliefs Scale (MBS) contains twenty-four items divided among five categories. Participants ranked how much they agreed with each statement on a scale from strongly disagree (one) to strongly agree (five). The minimum score for the MBS is a 24; the maximum is 120. After analyzing the participants' scores, we determined that a MBS score below 50 indicates moderate lack of adherence to marianismo while a MBS score of 50 indicates moderate adherence to marianismo. The average MBS score was 51.75, while the median score was 51.5. All participants had unique MBS scores, therefore there was no mode.

As stated previously, the average MBS score for our sample was 51.75, slightly above the threshold for moderate adherence to marianismo. The average age of our participants was 30 years old. Age did not have a significant effect on MBS score; the average MBS score for participants 30 and under was 54.5 while the average MBS score for participants 31 and older was 54. Those with no children had a slightly lower mean MBS score than the participants with children. For those without children, the average MBS score was 50.4. For those with one or

more children, the average MBS score was 54. Most of our participants were single. Our single participants had a mean MBS score of 60, above the mean for the entire sample. The married participants had a mean MBS score of 54, also above the mean, but those who were unmarried but lived with their partners had a significantly lower average MBS score (36), which was well below the sample’s overall average. Most of our participants had at least some college education. As education level increased, it seemed that adherence to marianismo decreased; both high school graduates and participants with some college education had approximate average MBS scores of 56. Those with a Bachelor’s or four-year degree had a mean score of 48, and the average MBS score for participants with a professional degree was 34. Participants’ average vaccine confidence score was a 6.5; though most participants gave a vaccine confidence rating of a six, seven, nine, or ten, one participant did rank their vaccine confidence rating as a one. On average, participants waited seven to nine months before receiving their COVID-19 vaccine; many participants even reported waiting over one year before getting vaccinated. The time a participant waited to receive their COVID-19 vaccine did not seem to have any effect on the MBS scores.

Table 12. Age and MBS Score

	Age: ≤ 30	Age: 31 ≤
Mean MBS Score	54.5	54

None of the t-tests ran yielded statistically significant results. However, there were some noticeable, non-significant differences between the scores. The average MBS score for participants 30 and younger was 54.5 while the average MBS score for participants 31 and older was 54. The 31 and older group had much more consistent MBS scores (ex. 54, 49) than the 30 and younger group, which contained a few scores close to the average and a few scores that

strayed from the mean. Although the mean scores for both groups were approximately the same, the younger subset of participants had a greater variation in scores.

Table 13. Number of Children and MBS Score

	Children: 0	Children: 1 ≤
Mean MBS Score	50.4	54

Though not a statistically significant result, our participants with children had a slightly higher mean MBS score than our childless participants. For the participants without children, their average MBS score was 50.4. For the participants with one or more children, the average MBS score was 54. This may be due in part to the fact that a few of the questions on the MBS relate to a good woman’s duty to her children. For example, many of the questions ask participants whether they agree that a good woman should “be the main source of strength for the family” or “be responsible for the spiritual growth of the family,” both of which could be answered differently if the informant’s perspective is that of someone with children or someone without children. Participants with or without children also answered question 4 differently: a good woman should teach their children to be loyal to the family. While all of our participants with children responded with a three (neither agree nor disagree) or four (agree), there was a wider variation in the responses of our childless participants. Their scores ranged from one (strongly disagree) to four (agree).

Table 14. Marital Status and MBS Score

	Marital Status: Unmarried	Marital Status: Married
Mean MBS Score	50.4	54

The vast majority of the participants were unmarried. Married participants had a higher average MBS score (54) than the unmarried participants (50.4). Similar to the differences between participants with and without children, many of the questions are related specifically to marriage and a woman’s duties as a wife. For example, the tenth question asks participants to rate whether they agree that a good woman should “be faithful to her partner.” Both of the married participants rated this item a five (strongly agree). While many of the unmarried participants rated this item a five (strongly agree) as well, we did have an unmarried participant rank this item a three (neither agree nor disagree). While remaining faithful to a partner is an important part of a relationship or potential future relationship, once a marriage is formed, remaining faithful to one’s partner becomes even more important.

Table 15. College Education and MBS Score

	Education Level: No College	Education Level: Some College ≤
Mean MBS Score	56.5	50.17

Most of our participants had at least some college education, and many had obtained college degrees. Those with no college education had a higher average MBS score (56.5) compared to those with at least some college education (50.17). As the education level of the participants increased, their MBS scores decreased. The participant with the highest level of education, a professional degree, had the lowest score of our entire sample: 34.

Table 16. COVID-19 Vaccine Confidence Rating and MBS Score

	Vaccine Confidence: ≤ 6	Vaccine Confidence: 7 ≤
Mean MBS Score	56.5	52.6

The participants had an average vaccine confidence rating of 6.5. Many participants rated their vaccine confidence as anywhere from a six through ten, though a few did rank their confidence as lower than the six. The average MBS score for participants who ranked their vaccine confidence as a six or less was 56.5 while those who ranked their vaccine confidence as a seven or more 52.6. Although these results lack any statistical significance, these findings do support the original hypothesis that women with higher adherence to *marianismo* have higher vaccine hesitancy/lower vaccine confidence.

Table 17. COVID-19 Vaccine Hesitancy and MBS Score

	Vaccine Hesitancy: Low	Vaccine Hesitancy: High
Mean MBS Score	52.6	50.3

In order to create a vaccine hesitancy score, participants' responses for all three questions from the vaccine hesitancy section of the survey were analyzed: vaccination status, vaccine confidence, and vaccine wait time. For each question, two groups were created: hesitant and not hesitant. For vaccination status, the vaccinated participants were classified as less hesitant (zero) while unvaccinated participants were classified as hesitant (one). For vaccine confidence, participants with a rating of seven or more were considered less hesitant (zero) while participants with a rating of six or less were considered hesitant (one). For vaccine wait time, participants who waited seven months or more were classified as hesitant (zero) while participants who waited six months or less were classified as less hesitant (one). The total vaccine hesitancy scores ranged from zero to three. Those with a vaccine hesitancy score of zero or one were classified as having low vaccine hesitancy. Those with a vaccine hesitancy score of two or three were classified as having high vaccine hesitancy. The average MBS score for those with low

vaccine hesitancy was 52.6. The average MBS score for those with high vaccine hesitancy was 50.3.

Table 18. COVID-19 Safety Behaviors Cumulative Score and MBS Score

	Safety Behavior Score: ≤ 8	Safety Behavior Score: $9 \leq$
Mean MBS Score	50.4	54

Participants were assigned a cumulative COVID-19 safety behaviors score based upon their reported frequencies of hand-washing, social distancing, and mask-wearing. Hand-washing frequency was ranked from one (zero to one times per day) to four (six or more times per day). Social distancing and mask-wearing were ranked on a scale from one (never) to five (always). The lowest possible total COVID-19 safety behaviors score is three; the highest is 14. Those with a cumulative score of eight and lower had low adherence to COVID-19 safety regulations while those with a cumulative score of nine and higher had high adherence to COVID-19 safety regulations. The average MBS score for those with low adherence to COVID-19 safety regulations was 50.4 while the average MBS score for those with high adherence to COVID-19 safety regulations was 54.

Table 19. Case Studies

	Age	Marital Status	Number of Children	Years of Education	Confidence in Vaccine	Vaccine Wait Time	MBS Score
P5	28	Single	0	Some college	10	4-6 months	75
P7	22	Unmarried but living with partner	0	Some college	N/A	Not vaccinated	38

P9	N/A	Unmarried but living with partner	0	Professional degree	8	7-9 months	34
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The fifth, seventh, and ninth participants, henceforth referred to as P5, P7, and P9, respectively, were our sample’s outliers. These three participants had a few similarities. None of the three had any children, and none were married. All three had at least some college education; P9 even had a professional degree. The three were divided by a few factors. While P5 and P9 are vaccinated, P7 is not vaccinated. They also had MBS scores that were either drastically higher or lower than the overall average of the sample.

P5

Our fifth participant, P5, is a 28-year-old female. She is unmarried, has no children, and has some college education. On a scale from one to ten, one being not at all confident and ten being extremely confident, she ranked her confidence in the COVID-19 vaccine as a ten. She reported waiting sometime between four to six months to get vaccinated once the COVID-19 vaccine was made available to her. Her score on the Marianismo Beliefs Scale was the highest in our sample: 75.

P5 did not indicate a one, or strong disagreement, for any of the statements on the MBS. She did indicate disagreement with all of the statements included in the “subordinacy to others” and “silencing oneself to maintain harmony” categories. She neither agreed nor disagreed with three of the statements in the “being virtuous and chaste” category: a good woman should remain a virgin until marriage, a good woman should wait until after marriage to have children, and a good woman should be pure. P5 either agreed with or strongly agreed with ten of the 24 items on the MBS. She agreed with all of the statements in the “spiritual pillar” category. She agreed that

a good woman should teach their children to be loyal to the family, do things that make the family happy, and adopt the values taught by her religion. She strongly agreed with four statements: a good woman should be a source of strength for her family, a good woman should be considered the main source of strength for her family, a good woman should keep the family unified, and a good woman should be loyal to her partner.

Compared to all other participants, P5 was the most adherent to *marianismo*. However, this adherence was only to a few select aspects of this traditional gender role. Based upon her responses, P5, does not believe in the subordinacy of women to their partners or other family members. Instead, she sees women as a powerful figure with a very important job in the family. She agrees that it is a woman's job to adopt the values taught by her religion and be a spiritual pillar and pass these onto her children. She strongly agrees that a woman should not only be a source of strength for her family, but should be a primary source of strength.

P7

Our seventh participant, P7, is a 22-year-old female. She is unmarried but lives with her partner, has no children, and has some college education. She declined to rank her confidence in the COVID-19 vaccine. She was the only unvaccinated participant in our sample. Her score on the Marianismo Beliefs Scale was 38, the second-lowest in the sample.

P7 responded to nineteen of the twenty-four MBS items with one, or "strongly disagree." She strongly disagreed with all five aspects of the "subordinacy to others" category, all six aspects of the "silencing oneself to maintain harmony" category, and the three aspects of the "spiritual pillar" category. She indicated disagreement for the statement that a good woman should wait until after marriage to have children. She neither agreed nor disagreed with the statement that a good woman should do things that make the family happy. One statement was

rated a four, or “agree,” and two were rated a five, or “strongly agree” by P7. She indicated agreement with the statement that a good woman should teach her children to be loyal to the family. She indicated strong agreement with the statements that a good woman should be a source of strength for her family and a good woman should be faithful to her partner.

Based upon the questions P7 responded in agreement with, one can assume that her priorities in regards to a woman’s role are in two areas: stability and loyalty. She agreed with the questions regarding being loyal to a partner and teaching children loyalty to the family unit as a whole. She also agreed that a good woman should be a source of strength for her family. While she neither agreed nor disagreed with the statement that a good woman should do things to make the family happy, in combination with her agreement to the aforementioned source of strength statement, it can still be assumed through her responses that P7 places a great emphasis on the overall stability of the family as a whole.

P9

Our ninth participant, P9, is a female who declined to report her age. She is unmarried but lives with her partner, has no children, and has obtained a professional degree. On a scale from one to ten, one being not at all confident and ten being extremely confident, she ranked her confidence in the COVID-19 vaccine as an eight. She reported waiting sometime between seven to nine months to get vaccinated once the COVID-19 vaccine was made available to her. Her score on the Marianismo Beliefs Scale was the lowest in our sample: 34.

Identical to P7, P9 responded to nineteen of the twenty-four MBS items with a one, or “strongly disagree.” She strongly disagreed with all five aspects of the “subordinacy to others” category, all six aspects of the “silencing oneself to maintain harmony” category, and the three aspects of the “spiritual pillar” category. She indicated disagreement for the statement that a

good woman should wait until after marriage to have children. She neither agreed nor disagreed with the statements that a good woman should do things that make the family happy and that a good woman should be considered the main source of strength for her family. P9 did not indicate strong agreement to any of the twenty-four statements in the MBS, however, she did indicate agreement to one statement: a good woman should be a source of strength for her family.

CHAPTER 6: DISCUSSION

***Marianismo* and Vaccine Hesitancy**

Originally, I hypothesized that increased adherence to *marianismo* would correlate with increased COVID-19 vaccine hesitancy. Previous studies have indicated that Hispanic women report lower COVID-19 vaccination intent and higher fear of adverse effects than Hispanic men (Urrunaga-Pastor et al. 2021). Past research has also suggested that adherence to *marianismo* and similar gender roles can lead to decreased ability to make decisions regarding sexual health, leading to the transmission of STDs and STIs such as HIV (Cianelli, Ferrer, & McElmurry 2008).

In order to test this hypothesis, participants' vaccine hesitancy was determined by examining their vaccination status, vaccine confidence rating, and vaccination wait time. Participants were either vaccinated or unvaccinated. Unvaccinated participants were considered hesitant while vaccinated participants were considered less hesitant. Vaccine confidence was rated on a scale from one (not at all confident) to ten (extremely confident). Participants with a vaccine confidence rating of six or less were considered hesitant while participants with a vaccine confidence rating were considered less hesitant. When asked how long they waited to get vaccinated, participants selected from the following options: less than one month; one to three months; four to six months; seven to nine months; ten months to one year; more than one year; N/A (I am not vaccinated). Participants who waited more than seven months were considered hesitant while participants who waited six months or less were considered less hesitant. All hesitant responses were marked as one while less hesitant responses were marked as zero. Based upon these questions, participants could score from zero to three on vaccine hesitancy. Participants also completed the MBS. The lowest possible score on the MBS was 24 while the

highest possible score was 120; the participants in the current study scored between 34 and 75. The participants were then divided into two groups: low vaccine hesitancy and high vaccine hesitancy. For women who displayed low vaccine hesitancy, the average MBS score was 52.6. For women who displayed high vaccine hesitancy, the average MBS score was 50.3.

Women with high vaccine hesitancy did not demonstrate higher adherence to *marianismo* than women with low vaccine hesitancy. In fact, women with high vaccine hesitancy were slightly less adherent, on average, to *marianismo* than those with low vaccine hesitancy. Though these results seem to contradict the literature, there is a potential explanation for this phenomenon. The COVID-19 vaccine was not mandated on a widespread level like behaviors such as mask-wearing. Therefore, people had more of a choice when it came to their vaccination status. Based on participant responses from the present study, although many women had high vaccine confidence ratings, many were either unvaccinated or waited many months before getting vaccinated. Instead of following the advice of family members, medical personnel, or religious leaders, for example, many women simply got vaccinated whenever they actually “needed” to, such as for a job or travel. By not adhering to *marianismo* and displaying high vaccine hesitancy, these women were demonstrating more independence in their decision-making process.

***Marianismo* and COVID-19 Safety Guidelines**

I hypothesized that increased adherence to *marianismo* would correlate with higher adherence to COVID-19 safety guidelines. Compared to Hispanic men, Hispanic women wear masks more often. Subsequently, Hispanic women also report lower COVID-19 test positivity rates than Hispanic men (Turner et al. 2021; Hearne & Niño 2022). During the fall and winter

holiday seasons, Hispanic women were less likely than Hispanic men to go against public health recommendations by gathering with non-household members (Peacock Jr. et al. 2022).

In order to test this hypothesis, participants were asked to respond to three questions related to their adherence to COVID-19 safety guidelines. The first was hand-washing frequency, which was ranked from one (zero to one times per day) to four (six or more times per day). Social distancing was the second and was ranked on a scale from one (never) to five (always). The third question was related to mask-wearing, which was ranked on the same scale as social distancing. The lowest possible cumulative COVID-19 safety behaviors score was three; the highest was 14. Women with a cumulative score of eight and lower had low adherence to COVID-19 safety regulations. Women with a cumulative score of nine and higher had high adherence to COVID-19 safety regulations. The average MBS score for women with low adherence to COVID-19 safety regulations was 50.4 while the average MBS score for women with high adherence to COVID-19 safety regulations was 54.

Women with higher adherence to COVID-19 safety regulations demonstrated higher adherence to *marianismo* than women with lower adherence to COVID-19 safety regulations. One of the primary pillars of *marianismo* is subordinacy to others. Women with high adherence to *marianismo* following the guidelines set for COVID-19 safety behaviors implies that this subordinacy not only applies to husbands and fathers, as is traditionally expected, but it applies to public health workers and government officials as well. As a result, Hispanic women are much more likely to adhere to COVID-19 safety regulations when they are enforced by a trusted and influential health agency.

***Marianismo* and Age**

The first of my exploratory hypotheses was that younger women would display lower adherence to *marianismo* than older women. Many of the pillars of *marianismo* are related to subservience to one's husband and other male family members, having children, and becoming the family's spiritual leader and source of strength (Castillo et al. 2010). Though such cultural values are instilled at an early age, many of the pillars related to marriage and children do not affect women until a certain age, typically mid- to late 20s to 30s. Therefore, it is to be expected that an older woman would be prioritizing upholding such values more than a younger, unmarried, childless woman.

In order to test this hypothesis, the survey included an open-ended question in the demographics section which allowed participants to report their age. Participants' ages ranged from 20 to 58 with the mean age being 30. Participants also completed the 24-item Marianismo Beliefs Scale (MBS). The lowest possible score on the MBS was 24 while the highest possible score was 120; the participants in the current study scored between 34 and 75. The participants were divided into two groups: participants 30 years old and younger and participants 31 years old and older. The MBS scores for the participants in each group were then averaged. For women 30 years old and younger, the average MBS score was 54.5. For women 31 years old and older, the average MBS score was 54.

Younger women did not display lower adherence to *marianismo* than older women. The difference in the average MBS scores for these two age groups was 0.5. Though the difference is so minute that it does not imply a true difference between the two age groups, it was actually the younger group of participants that had a slightly higher average score than the older group. The difference, perhaps, may lie in the position of an older woman in the familial hierarchy. Younger

women not only have their husbands to be subordinate to, but they also have numerous older family members which they are “under.” As a woman ages, the family dynamics shift. Older adults pass away and children are born, thus moving the woman up in the family hierarchy. Once she has fewer people to remain subordinate to, perhaps there is less of a pressure to adhere to the pillars of *marianismo*.

***Marianismo* and Marital Status**

The second exploratory hypothesis was that unmarried women would display lower adherence to *marianismo* than married women. As stated previously, many of the components of *marianismo* are related to marriage (Castillo et al. 2010). For example, *marianismo* dictates that a “good woman” should remain a virgin until she is married, remain faithful to her partner, satisfy her partner’s needs without question, be subservient to her partner, etc. If a woman is unmarried, she does not yet have to deal with the pressures of married life that are incurred by a married woman who adheres to *marianismo*.

In order to test this hypothesis, the survey included a question in the demographics section about marital status. Participants chose between the following options: single; unmarried but living with partner; married; divorced; widowed. None of the participants reported being divorced or widowed. Most of the participants in the sample were single/unmarried. Participants also completed the MBS. The lowest possible score on the MBS was 24 while the highest possible score was 120; the participants in the current study scored between 34 and 75. The participants were then divided into two groups: unmarried women and married women. The MBS scores for the participants in each group were then averaged. For unmarried women, the average MBS score was 50.4. For married women, the average MBS score was 54.

Unmarried women did display lower adherence to *marianismo* than married women. Many of the pillars of *marianismo* dictate what is expected of a woman once she is married. Prior to marriage, a woman may anticipate pressures such as satisfying her partner and remaining subservient to her spouse, but does not yet face them. As predicted, this lack of active pressure to be a good wife was positively correlated with lower adherence to *marianismo*. Although marriage and having children are generally important occurrences in Hispanic culture, women who are unmarried likely have other priorities aside from attending to a spouse and children. It is always possible for a woman's adherence to *marianismo* to change throughout her life, therefore, it is reasonable to assume that while unmarried and childless, a woman's main priority may not be a husband and kids.

***Marianismo* and Number of Children**

The third exploratory hypothesis was that women without children would display lower adherence to *marianismo* than women with children. One of the primary pillars of *marianismo* is having and raising children. For example, one of the tenants of *marianismo* is to wait until after marriage to have children. Another is to teach their children to be loyal to the family (Castillo et al. 2010). Many of the other pillars allude to a family unit consisting of a mother, father, and their children, making it reasonable to conclude that having children has great importance placed on it and subsequently, great pressure placed on a woman.

In order to test this hypothesis, the survey included an open-ended question which allowed participants to report the number of children they have. The number of children participants in this study had ranged from zero to four, though most participants had no children. Participants also completed the MBS. The lowest possible score on the MBS was 24 while the highest possible score was 120; the participants in the current study scored between 34 and 75.

The participants were then divided into two groups: women without children and women with children. The MBS scores for the participants in each group were then averaged. For women without children, the average MBS score was 50.4. For women with children, the average MBS score was 54.

Women without children did display lower adherence to *marianismo* than women with children. Similar to unmarried women, women without children face less pressure than women with children to serve as both a mother and rear children while supporting her partner and being the source of strength for the entire family unit. Since many of the pillars of *marianismo* are exclusive to women who either already have children or plan to have them soon, childless women are free from many of the demands dictated by adherence to *marianismo*.

***Marianismo* and Education Level**

The fourth of my exploratory hypotheses was that women with at least some college education would display lower adherence to *marianismo* than women without any college education. In general, college-educated individuals demonstrate decision-making that is less influenced by traditional gendered expectations. Among Hispanic adults, those with at least some college education were more likely to be vaccinated against COVID-19, implying a higher degree of freedom of choice and a lower level of subservience (Hamel et al. 2021).

In order to test this hypothesis, the survey included a question in the demographics section about the highest level of education they have completed. Participants chose between the following options: less than high school; high school graduate; some college; Associate/two-year degree; Bachelor's/four-year degree; professional degree; doctorate. Most of the participants in the sample had at least some college. Participants also completed the MBS. The lowest possible score on the MBS was 24 while the highest possible score was 120; the participants in the

current study scored between 34 and 75. The participants were then divided into two groups: women with no college education and women with at least some college education. The MBS scores for the participants in each group were then averaged. For women with no college education, the average MBS score was 56.5. For women with at least some college education, the average MBS score was 50.17.

Women with at least some college education did display lower adherence to *marianismo* than women without any college education. As previous studies have shown, higher education is linked to increased likelihood to be vaccinated against COVID-19 (Hamel et al. 2021). In this study, higher education was linked to lower *marianismo* adherence, which is commonly associated with subordination and not expressing one's needs. Reasonably, one can conclude from these results that higher education levels are positively correlated with freedom in decision-making and expression, implying lower adherence to *marianismo*. With this freedom in decision-making and expression comes less of a reliance upon and deference to a spouse and other male family members, leading to decreased adherence to *marianismo*.

***Marianismo* and Vaccine Confidence**

The fifth and final exploratory hypothesis was that women with higher self-reported vaccine confidence would display lower adherence to *marianismo* than women with lower self-reported vaccine confidence. Among Hispanic people in general, although most are willing to accept a vaccine, many report that they would wait at least two months after becoming eligible to accept a COVID-19 vaccine (Argote et al. 2021). Many Hispanic-Americans reported fears that the vaccine was being produced too quickly, and many were worried that getting vaccinated could negatively impact their own or a family member's immigration status (Hamel et al. 2021).

Latin American women, in past studies, have reported lower vaccination intent than men (Urrunaga-Pastor et al. 2021).

In order to test this hypothesis, the survey included a question in the vaccine hesitancy section about their confidence in the effectiveness of the COVID-19 vaccine. Participants rated their confidence on a scale of one to ten, one being not at all confident and ten being extremely confident. The average vaccine confidence rating was 6.5. Most of the women in the sample rated their vaccine confidence as a six through ten. Participants also completed the MBS. The lowest possible score on the MBS was 24 while the highest possible score was 120; the participants in the current study scored between 34 and 75. The participants were then divided into two groups: women with confidence ratings of six and under and women with confidence ratings of seven and higher. The MBS scores for the participants in each group were then averaged. For women with confidence ratings of six and under, the average MBS score was 56.5. For women with confidence ratings of seven and higher, the average MBS score was 52.6.

Women with higher self-reported vaccine confidence did display lower adherence to *marianismo* than women with lower self-reported vaccine confidence. For overall vaccine hesitancy, women with lower adherence to *marianismo* reported higher vaccine hesitancy. However, for vaccine confidence specifically, *marianismo* was associated with higher confidence. For many people, the COVID-19 vaccine was a recommendation, not a requirement, so there is likely little association between *marianismo* and vaccine confidence. These results may also be the result of the vast majority of the women in our study being vaccinated. Although they may have been initially hesitant to get vaccinated, following their vaccination, their perceptions of the effectiveness of the vaccine may have altered, which could lead to higher average vaccine confidence scores. Additionally, most women reported recommending the

COVID-19 vaccine to their friends and family members, indicating some change post-vaccination.

Limitations

A few study limitations should be noted. Due to time constraints, the interviews had to be conducted via an online survey. Though this did control for certain potential response effects such as the social desirability effect, it likely had a limiting effect on the participants' responses to the open-ended interview questions (Bernard 2017). In addition to the delivery method, the survey was conducted in English instead of Spanish. This was primarily done because the survey respondents were bilingual and had a solid understanding of English, and it was more convenient for ensuring that the questions were interpreted in the same way they were intended to be when written in English. However, completing a survey in one's second language could have impacted responses.

In spite of extensive recruitment efforts, only fourteen women responded to the survey, eight of which either completed or nearly completed the Marianismo Beliefs Scale (MBS). Because the sample was so small, the generalizability of the study results is greatly reduced. Additionally, the sample was quite homogenous. All but one of the participants were vaccinated, which likely affected the participants' responses to questions about COVID-19 vaccine confidence, outside influences on their vaccination decision, and whether or not they recommended vaccination to their family and friends. Most of the participants were also 30 years old or younger, did not have children, and had at least some college education. Participants were not asked about their specific cultural backgrounds or nations of origins. This may have both had an impact on their responses and limited our understanding of the impact of nation of origin on

adherence to *marianismo*, but it was not possible to include questions pertaining to every possible exploratory variable in this survey.

Despite the effects that these limitations had on statistical significance of the study results, there were some results yielded from the study that were worthy of note. The original creation and validation of the MBS scale did not involve the analysis of the interaction between MBS scores and demographic information (Castillo et al. 2010). In the present study, there was a notable difference between the mean MBS scores of our two different groups for the number of children, marital status, education level, and vaccine confidence. In order to potentially obtain statistically significant results in the future, this study could be repeated with a larger sample size. To find out the real effect of age, marital status, number of children, and COVID-19 vaccine hesitancy, another study or multiple separate studies could be conducted with larger sample sizes, each containing multiple participants in each dichotomous group.

Future Research Directions

There are a number of potential directions for future research based on the results of the present study. Further exploration is required to determine the true impact of age, marital status, number of children, education level, and vaccine confidence on participants' MBS scores. Not only will this further our understanding of adherence to *marianismo* as a whole, but it will greatly expand the amount of scholarly literature available related to COVID-19 and Hispanic women, notably how their gender roles impact their beliefs and behaviors related to the disease. Additionally, such a concept could be expanded to other diseases. Establishing a working understanding of cultural perceptions of disease among Hispanic-Americans alone is not sufficient because it does not explain why members of this community behave in certain ways during a health crisis. Traditional Hispanic gender roles and expectations are, to a certain degree,

dichotomous. Thus, the health-related actions of Hispanic men and women may vary, as demonstrated by differences in mask-wearing and COVID-19 test positivity among both groups (Turner et al 2021; Hearne & Niño 2022).

This study could also be recreated in a different international context. The MBS scale was first validated among Hispanic-Americans, and the participants in the present study were all Hispanic-American (Castillo et al. 2010). At present, the scale has yet to be used in research involving women from Central and South America. Many Latin American countries experienced high rates of COVID-19 test positivity and numerous deaths attributed to COVID-19. Additionally, people from Latin America may display higher adherence to traditional gender roles than Hispanic-Americans who are immersed in a different culture. Recreating this study in another region would not only serve as an opportunity to revalidate the MBS scale among Latin American women, but could provide the same valuable insight into possible explanations for women's actions during a global health crisis in a different sociocultural context. If this study were to be recreated in Latin America, conducting the interviews in-person and in Spanish would greatly increase its accessibility. In order to fully understand the impact of COVID-19 in Latin America, a free-listing activity about the COVID-19 pandemic could be used, which would allow the participants to provide more context for their responses regarding the COVID-19 vaccination and safety behaviors questions. Aside from this addition, the current survey structure with its three sections (demographics, COVID-19 vaccine hesitancy/safety behaviors adherence, and the Marianismo Beliefs Scale) could be maintained.

CHAPTER 7: CONCLUSION

As of 2020, the Hispanic population in the United States was over 62.1 million (Passel, Lopez, & Cohn 2022). The Hispanic population in the Southeastern United States has increased greatly in the past few decades, with many states' populations growing by over 100% in the decade between 1990 and 2000 (Smith & Furuseth 2004). North Carolina saw an increase of 386% during this time, going from 76,726 in 1990 to 372,964 in 2000. While 17.2% of Hispanics in the general population live below the poverty line, the same is true of 33.6% Hispanic North Carolinians (Larsson, Mathews, Torres, & Lea 2017). Hispanics in North Carolina are three times more likely than White North Carolinians to be uninsured.

Hispanic-Americans have faced disproportionately high rates of COVID-19 since the beginning of the pandemic. In March 2020, despite only accounting for approximately one-fifth of the population, Hispanic-Americans accounted for 28.4% of all COVID-19 cases. Additionally, in May 2020, it was reported that the proportion of COVID-19 cases among Hispanics outweighed the proportion of Hispanic residents in 87% of the thirty-one states which included race and ethnicity data in early COVID-19 case reports (Macias Gil et al. 2020). In North Carolina, this discrepancy was even more notable; only 4.2% of non-Hispanic White outpatient facility and hospital patients had positive COVID-19 tests while 29.9% of Hispanic patients tested positive (Turner et al. 2021). The increased test positivity rates cannot be explained by failing to take necessary precautions against COVID-19; Hispanic-Americans, especially Hispanic-American women, were more likely than White Americans to adhere to COVID-19 safety guidelines such as mask-wearing during the early months of the pandemic (Hearne & Niño 2022).

Despite the increased likelihood of mask-wearing and COVID-19 safety guideline adherence, many Hispanic people distrust and wait an extended period of time to receive the COVID-19 vaccine. A study conducted among participants from Argentina, Brazil, Chile, Mexico, and Peru found that only 59% of participants would get the COVID-19 vaccine when available. However, only 41% of the accepting participants would receive it within two months of the vaccine becoming available. On average, participants reported that they would wait 4.3 months to get the COVID-19 vaccine (Argote et al. 2021). Gender differences in vaccine acceptance have been noted in previous studies as well. In comparison to males, females and non-binary people demonstrate lower vaccination intent and increased fear of adverse effects (Urrunaga-Pastor et al. 2021).

Medical anthropology is a subfield of study in which anthropologists seek to determine the impact of culture on health beliefs and practices (Joralemon 2017). Rather than only viewing the biological aspects of a disease, many medical anthropologists operate under the interpretive framework, focusing on the cultural meaning and interpretation of a disease (Grønseth 2009). Utilizing the interpretive medical anthropological perspective can have numerous advantages when examining a patient or interviewing research participants, since taking the patient's physical symptoms and their sociocultural beliefs are taken into account. The anthropologist could advise the physician that the symptoms their patients presented were a representation of the mind-body connection that resides in the traditional perception of illness in Hispanic culture (2009).

There are many potential cultural reasons that could explain why women are more likely to abide by COVID-19 safety guidelines yet distrust the COVID-19 vaccine. One of which is *marianismo*. This traditional Hispanic gender role, which was largely understudied until the

1970s, defines what a “good woman” should be. Rooted largely in Christian ideals, a “good woman” is expected to be subservient, maintain a harmonious family, and she should tend to her home, husband, and children (Stevens 1973). Adherence to certain aspects of *marianismo* have been linked to negative physical and emotional health outcomes. Overall male dominance and female submission can prevent women from making decisions during sexual encounters and lead to HIV transmission (Cianelli, Ferrer, & McElmurry 2008). In regard to *marianismo* specifically, adherence to the family pillar component has been linked to increased depression and anger, and adherence to the spiritual beliefs component has been linked to increased anxiety and an angry temperament (Nuñez et al. 2016).

In order to properly assess the nature of the relationship between *marianismo*, COVID-19 vaccination hesitancy, and COVID-19 safety guideline adherence, I developed a total of seven hypotheses for this study. The original two hypotheses focused broadly on *marianismo* and COVID-19 vaccine hesitancy and COVID-19 safety guideline adherence. Five additional exploratory hypotheses were examined as well, which were related to demographic variables such as age, number of children, level of education, and marital status, and specifically vaccine confidence. The seven hypotheses were as follows:

1. Hispanic women with a high adherence to *marianismo* would display increased vaccine hesitancy.
2. Hispanic women with a high adherence to *marianismo* would display increased adherence to COVID-19 safety guidelines.
3. Younger women would display lower adherence to *marianismo* than older women.
4. Unmarried women would display lower adherence to *marianismo* than married women.

5. Women without children would display lower adherence to *marianismo* than women with children.
6. Women with at least some college education would display lower adherence to *marianismo* than women without any college education.
7. Women with higher self-reported vaccine confidence would display lower adherence to *marianismo* than women with lower self-reported vaccine confidence.

I created a survey with three sections: demographics, a structured interview, and a semi-structured interview. After reporting basic demographic information (ex. age, gender identity, marital status, number of children, etc.), participants were administered the Marianismo Beliefs Scale (MBS), 24 questions which were used to measure participants' adherence to *marianismo* (Castillo et al. 2010). The semi-structured portion of the survey consisted of questions about the COVID-19 vaccine and COVID-19 safety guidelines. A partnership with the Association of Mexicans in North Carolina, Inc. (AMEXCAN) was established in order to obtain participants, and through AMEXCAN, I was able to connect with numerous other community partners.

The data did not support the hypothesis that women with increased adherence to *marianismo* display increased vaccine hesitancy (Hypothesis 1). Among the women in this sample, the results were actually the opposite: participants with higher vaccine hesitancy displayed decreased adherence to *marianismo*. Though the results were the opposite of what was predicted, the participants' responses to the open-ended questions were able to provide insight into potential reasons why. One potential reason is that vaccination guidelines were more lenient than COVID-19 public safety behaviors-such as mask-wearing, therefore there was no authority figure or institutional ordinance to obediently follow. The data also did not support the

hypothesis that younger women would display lower adherence to *marianismo* than older women (Hypothesis 3). The difference between the average MBS scores (54.5 and 54, respectively) was too small to be able to draw any conclusions. However, it is worthy of note that the younger women had a slightly higher average MBS score than the older women surveyed.

The data supported the remaining five hypotheses. Hispanic women with a higher adherence to *marianismo* did display increased adherence to COVID-19 safety guidelines (Hypothesis 2). COVID-19 safety guidelines were strictly enforced, especially during the beginning of the pandemic. One of the principal pillars of *marianismo* is following guidelines from authority figures without question, which appears to be consistent for these results. Unmarried women and women without children both displayed lower adherence to *marianismo* than married women and women with children (Hypotheses 4 and 5). Two of the main pressures placed upon women by *marianismo* is getting married, being a good wife, and having children. Once a woman has a partner and children to care for, the pressure to maintain their status as a “good wife/good mother” is much more intense. Women with at least some college education were less adherent to *marianismo* than women without any college education (Hypothesis 6). Women with higher self-reported vaccine confidence did display lower adherence to *marianismo* than women with lower self-reported vaccine confidence (Hypothesis 7). Although the data did not support the hypothesis that women who adhered more to *marianismo* would display higher vaccine hesitancy than those who adhered less to *marianismo*, vaccine confidence scores indicated differently. *Marianismo* adherence is likely not directly responsible for the participants’ increased self-reported vaccine confidence, but most of the participants with above average MBS scores who reported high vaccine confidence reported recommending the vaccine to family members and friends, indicating an increased sense of responsibility for their loved ones.

Although the small sample size of the present study was a hindrance to obtaining results of statistical significance, these results have laid an excellent foundation for future studies. With a larger sample size and a more balanced group of participants, the true extent to which demographic variables such as age, marital status, number of children, etc. impacts adherence to *marianismo* can be uncovered. Additionally, further studies should be conducted on *marianismo* and COVID-19 vaccine hesitancy and on *marianismo* and COVID-19 safety guidelines. For much of the pandemic, the Hispanic community as a whole was greatly understudied, and in many cases, excluded from research. Even in studies which did include Hispanic participants, none examined the effects of gender roles on COVID-19 vaccination hesitancy or COVID-19 safety guideline adherence. Not only can such studies provide insight into how Hispanic gender roles impact medical decisions regarding COVID-19, such information can aid public health officials and policy makers during future health crises on a local or international scale.

The five supported hypotheses uphold the idea that culture has an impact on healthcare beliefs and decisions (Joralemon 2017). This concept and studies which support it can be translated to actual public health interventions. Past literature reviews have found that culturally competent health education interventions result in higher rates of measurable health improvements when compared to standard health education interventions. In regards to the Hispanic-American population, numerous studies have shown that cultural competency has resulted in more effective intervention outcomes, including many interventions surrounding health conditions such as diabetes (Barrera Jr. et al. 2013). The success rates of past health interventions and data from research including the present study can be used by public health officials to develop culturally competent interventions in a variety of contexts to increase

positive outcomes. In this case, such a design could be used to increase vaccine rates and increase adherence to safety guidelines.

Racial and ethnic inequalities are persistent concerns in healthcare. By conducting research focusing on how inequalities and potential cultural factors during a pandemic contribute to how community members respond to such a health crisis, medical anthropologists can aid public health officials in understanding how to better accommodate members of a diverse population. Notably within the Hispanic-American community, there are cultural differences which affect their perception of disease and their response to it, as well as the actions they take in an attempt to protect themselves from disease. Gaining a thorough understanding of such cultural differences can better enable healthcare workers, public health officials, and policy makers, notably during widespread health crises, to aid members of the Hispanic-American community.

The present study and its potential future directions can provide further contributions to the field of medical anthropology. Specifically, by examining the intersection of adherence to cultural norms and healthcare decisions, the present study is an excellent example of applied medical anthropology. As stated previously, Hispanic-Americans are vastly understudied compared to other racial and ethnic populations in the United States, notably in the context of the COVID-19 pandemic. Few studies and even fewer public health campaigns have been directed at providing culturally competent care to Hispanic-Americans.

One of the primary contributions to the field of medical anthropology made by conducting this research is the exploratory nature of our analyses of the interaction between demographics and adherence to *marianismo*. Data from the present study suggests that *marianismo* adherence differs among women of varying marital status, women with or without children, and women with variable years of education. In a broader sense, this translates to the

recognition of the impact of adherence to gender roles and various aspects of culture on healthcare decisions. The Hispanic population in the United States is especially diverse, so recognizing that there are differences within the community and tailoring healthcare initiatives to various facets within the broader population is vital to the effectiveness of public health initiatives. *Para su salud, no necesita esperar.*

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APPENDIX A: IRB LETTER OF APPROVAL



EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board
4N-64 Brody Medical Sciences Building Mail Stop 682
600 Moyer Boulevard Greenville, NC 27834
Office 252-744-2914 Fax 252-744-2284
rede.ecu.edu/umcirb/

Notification of Exempt Certification

From: Social/Behavioral IRB
To: [Jessica Ruiz](#)
CC: [Blakely Brooks](#)
Date: 12/14/2022
Re: [UMCIRB 22-001219](#)
Por Qué Esperar?: Examining COVID-19 Vaccine Hesitancy and Hispanic Gender Roles in Eastern North Carolina

I am pleased to inform you that your research submission has been certified as exempt on 12/14/2022. This study is eligible for Exempt Certification under category # 2b.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

Document	Description
IRBRecruitmentDocument.docx(0.01)	Recruitment Documents/Scripts
IRBVerbalConsentScript.docx(0.01)	Consent Forms
PorQueEsperar-Questionnaire.docx(0.01)	Interview/Focus Group Scripts/Questions
Questionnaire (0.01)	Surveys and Questionnaires
Thesis Proposal(0.01)	Study Protocol or Grant Application

For research studies where a waiver or alteration of HIPAA Authorization has been approved, the IRB states that each of the waiver criteria in 45 CFR 164.512(i)(1)(i)(A) and (2)(i) through (v) have been met. Additionally, the elements of PHI to be collected as described in items 1 and 2 of the Application for Waiver of Authorization have been determined to be the minimal necessary for the specified research.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

APPENDIX B: MARIANISMO BELIEFS SCALE (MBS) ITEMS

Subscale and MBS items
<i>1. Family pillar</i>
A source of strength for her family.
Considered the main source of strength of her family.
Keep the family unified.
Teach their children to be loyal to the family.
Do things that make my family happy.
<i>2. Virtuous and chaste</i>
Remain(ed) a virgin until marriage.
Wait until after marriage to have children.
Be pure.
Adopt the values taught by her religion.
Be faithful to her partner.
<i>3. Subordinate to others</i>
Satisfy her partner's sexual needs without argument.
Not speak out against men.
Respect men's opinions even when she does not agree.
Avoid saying no to people.
Do anything a male in the family asks her to do.
<i>4. Silencing self to maintain harmony</i>
Not discuss birth control.
Not express her needs to her partner.
Feel guilty about telling people what she needs.
Not talk about sex.
Be forgiving in all aspects.
Always be agreeable to men's decisions.
<i>5. Spiritual pillar</i>
The spiritual leader of the family.
Responsible for taking family to religious services.
Responsible for the spiritual growth of the family.

APPENDIX C: *¿Por Qué Esperar?* SURVEY

Demographics

1. How old are you?
 - a. _____
2. What is your gender?
 - a. Male
 - b. Female
 - c. Non-binary/other
 - d. Prefer not to say
3. What is your current marital status?
 - a. Single
 - b. Unmarried, but living with partner
 - c. Married
 - d. Divorced
 - e. Widowed
4. How many children do you have?
 - a. _____
5. What is the highest level of education you have completed?
 - a. Less than high school
 - b. High school graduate
 - c. Some college
 - d. Associate/2 year degree
 - e. Bachelor's/4 year degree

- f. Professional degree
- g. Doctorate

Vaccine Hesitancy

1. Have you received a COVID-19 vaccination?
 - a. Yes
 - b. No
2. On a scale from 1 to 10, 1 being not at all confident and 10 being extremely confident, how confident are you in the effectiveness of the COVID-19 vaccine?
 - a. _____
3. Approximately how long after the vaccine became available did you wait to get vaccinated?
 - a. Less than one month
 - b. 1-3 months
 - c. 4-6 months
 - d. 7-9 months
 - e. 10-12 months
 - f. More than one year
 - g. I am not vaccinated
4. Were there any external forces (ex. opinions of family members/friends, workplace regulations, organizational endorsements, etc.) that influenced your decision to get vaccinated/to not get vaccinated? If yes, please list these influences.
 - a. _____

5. Have you encouraged the people close to you (ex. family members, friends, coworkers, etc.) to get vaccinated? If yes, why? If no, why not?

a. _____

Marianismo Beliefs Scale

1. On a scale of 1 to 5, 1 being strongly disagree and 5 being strongly agree, please rate your level of agreement with each statement.

A good woman should:

- a. Be a source of strength for her family

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- b. Be considered the main source of strength for her family

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- c. Keep the family unified

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- d. Teach their children to be loyal to the family

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- e. Do things that make the family happy

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

2. On a scale of 1 to 5, 1 being strongly disagree and 5 being strongly agree, please rate your level of agreement with each statement.

A good woman should:

- a. Remain(ed) a virgin until marriage

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- b. Wait until after marriage to have children

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- c. Be pure

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- d. Adopt the values taught by her religion

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- e. Be faithful to her partner

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

3. On a scale of 1 to 5, 1 being strongly disagree and 5 being strongly agree, please rate your level of agreement with each statement.

A good woman should:

- a. Satisfy her partner's needs without argument

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- b. Not speak out against men

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- c. Respect men's opinions even when she does not agree

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- d. Avoid saying no to people

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

- e. Do anything a male in her family asks her to do

Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

4. On a scale of 1 to 5, 1 being strongly disagree and 5 being strongly agree, please rate your level of agreement with each statement.

A good woman should:

- a. Not discuss birth control
Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree
 - b. Not express her needs to her partner
Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree
 - c. Feel guilty about telling people what she needs
Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree
 - d. Not talk about sex
Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree
 - e. Be forgiving in all aspects
Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree
 - f. Always be agreeable to men's decisions.
Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree
5. On a scale of 1 to 5, 1 being strongly disagree and 5 being strongly agree, please rate your level of agreement with each statement.

A good woman should:

- a. Be the spiritual leader of the family
Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree
- b. Be responsible for taking family to religious services
Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree
- c. Be responsible for the spiritual growth of the family
Strongly disagree - Disagree - Neither agree nor disagree - Agree - Strongly agree

COVID Safety Behaviors

1. Approximately how many times do you wash your hands on an average day?

- a. 0-1 time(s)
 - b. 2-3 times
 - c. 4-5 times
 - d. 6+ times
2. How often do you make a conscious effort to maintain a social distance of six feet between yourself and another person in a public space?
- a. Never
 - b. Rarely
 - c. Sometimes
 - d. Frequently
 - e. Always
3. How often do you wear a mask or other face covering when in a public, indoor space?
- a. Never
 - b. Rarely
 - c. Sometimes
 - d. Frequently
 - e. Always

APPENDIX D: ¿Por Qué Esperar? SURVEY FLIER



●
**¿POR QUÉ ESPERAR?
TAKE OUR SURVEY TODAY!**

WHAT IS OUR STUDY ABOUT?

We are seeking to determine potential links between COVID-19 vaccination status and safety behaviors, and expectations for Hispanic women.

PLEASE PARTICIPATE IF...

- You are over the age of 18
- You are a Hispanic woman
- You live in eastern North Carolina

FOLLOW THIS LINK...

https://ecu.az1.qualtrics.com/jfe/form/SV_af8NxRRmQwLzMYm

...OR SCAN THIS CODE



IF YOU HAVE ANY QUESTIONS...

Please email:

ruizj19@students.ecu.edu