



# Factors Determining the Likelihood of Pregnant Women Accepting the Administration of the COVID-19 Vaccine in Puerto Rico



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## Introduction

As of November 22, 2021, at least 147,516 pregnant women in the United States have been infected, and at least 240 pregnant women have died. Pregnant women are prone to having severe side effects to COVID-19 when compared to non-pregnant females, according to the American College of Obstetricians and Gynecologists (ACOG). Furthermore, comparison rates of pregnant and nonpregnant women demonstrated Hispanic pregnant women are more susceptible to infection of SARS-CoV-2. According to the CDC, as of November 28, 2021, 69.7% of the U.S. population has received at least one dose of the COVID-19 vaccine and only 24.4% of the pregnant population has received at least one dose.

**Objective:** This prospective study aimed to identify sociodemographic factors, and correlations between determining factors that may impact the acceptance of the COVID-19 vaccine among Hispanic pregnant women living in Puerto Rico. These factors can provide valuable information that targets the most prevalent worries among this population, regarding the administration of the COVID-19 vaccine. This can allow for a better physician-patient conversation when educating on vaccine administration; one focused on the most common worries and hesitancy factors that are of prevalence for the Hispanic pregnant population.

## Methodology

- **Cross-sectional study**
  - Subjects: 100 Hispanic women who are currently pregnant or were pregnant at the time the COVID-19 vaccine was made available to them.
  - 3-Part online survey: demographics, socioeconomic factors, past obstetric history, beliefs on COVID-19 and its vaccine.
  - Survey estimated time: ~15 minutes
- **Recruitment Techniques**
  - Vaccination clinic: approached in person
  - VITA Healthcare: contacted via phone
  - Social media: Student Professional Accounts
- **Primary dependent variable**
  - COVID-19 vaccine status
- **Criteria to Participate**
  - Female pregnant at time of survey or during the time the COVID-19 vaccine was made available to them
  - Hispanic women, 21 years of age or older, in Puerto Rico
- This study is approved by the UCC IRB (Protocol Number: 2021-19)

## Results

Figure 1: Have you received the COVID-19 Vaccine?

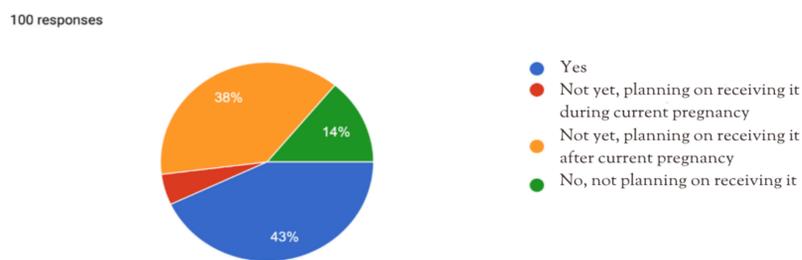


Figure 2: Has your OB/GYN or primary care physician recommended receiving the COVID-19 vaccine?

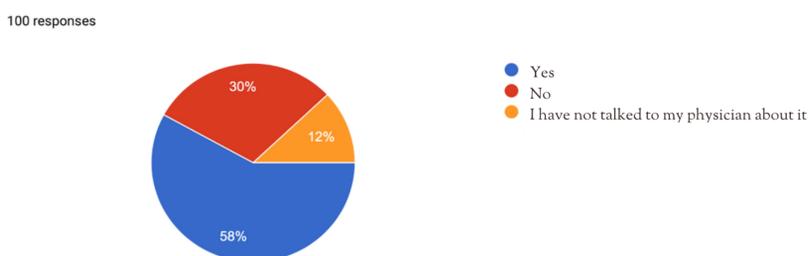


Figure 3: Select all that apply as to why you decided to receive the vaccine

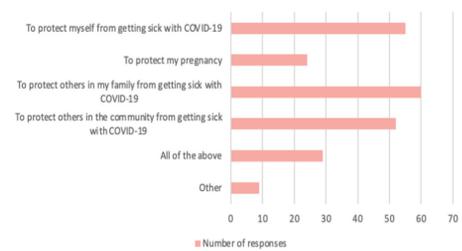


Figure 4: Select all that apply as to why you decided to not receive the vaccine

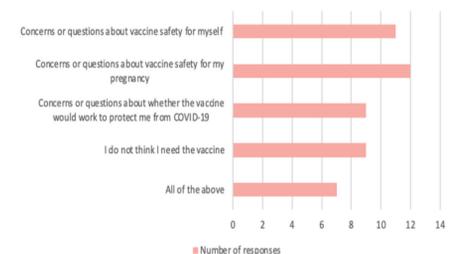


Table 1. Participants' main source of information

Main source of information	Percentage(%)
Primary Care Physician and/or ObGyn	40
Family and friend's advice (word of mouth)	16
Social media	12
Informative articles from the CDC, ACOG, among others	29
Other	20

## Discussion

This study focuses on the perspective of pregnant women regarding the Covid-19 vaccine, and it searches for the main causes of hesitancy regarding its administration. Collaboration with Vita Healthcare Inc. allowed the study to have a broad representation of women across Puerto Rico, not just the metropolitan area.

When assessing attitudes and beliefs, 41% of participants did not agree that there is enough data to prove the vaccine's safety and efficacy, it being the greatest factor contributing to the hesitancy. The second and third greatest hesitancy factors are: that getting the administration of the vaccine during the pregnancy may not be beneficial to the baby, and that the vaccine may not be necessary to protect oneself from COVID-19, respectively.

Another factor that influences greatly on the decision to receive the administration of the vaccine is the participant's main source of information. Most of the participants, 40%, answered that their main source was the advice from their primary physician or OB/GYN.

## Conclusion

Our study provides valuable information regarding the vaccine hesitancy administration focusing on Hispanic women living in Puerto Rico. The lack of data proving the efficacy and safety of the vaccine, specifically on pregnant women and the baby, is the most significant factor that contributes to the hesitancy. Being primary physicians and OB/GYN's the primary source of information for most of the participants, it is imminent to demonstrate the importance of having a good physician-patient conversation about the topic. Knowing the major worries and doubts among this population, physicians can focus on these to provide a better education for the patient; enabling them to make an informed decision regarding whether to receive or reject the administration of the vaccine during pregnancy.

## Acknowledgments

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