

## Research Paper


### Perceptions of COVID-19 Vaccination Among Pregnant Mothers in Qom, Iran



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**Citation** Khalajinaia Z, Bagheri F, Ahangari R. [Perceptions of COVID-19 Vaccination among Pregnant Mothers in Qom, Iran (Persian)]. *Qom Univ Med Sci J.* 2023; 16(12):994-1003. <https://doi.org/10.32598/qums.16.12.2363.2>  
 <https://doi.org/10.32598/qums.16.12.2363.2>



Received: 22 Nov 2022  
 Accepted: 01 Jan 2022  
 Available Online: 01 Mar 2023

**Keywords:**  
 Pregnant Women,  
 Qualitative  
 Research, COVID-19,  
 Coronavirus

## ABSTRACT

**Background and Objectives** Women during pregnancy are high risk for contracting coronavirus disease 21019 (COVID-19), and vaccination is probably the best way to prevent it during this period. This study aims to survey perceptions of COVID-19 vaccination among Pregnant Mothers in Qom, Iran.

**Methods** This is a qualitative study using the content analysis approach, Semi-structured interviews were used to collect information. Participants were 22 pregnant mothers living in Qom city who were eligible for vaccination, but had not yet been vaccinated.

**Results** The results of content analysis led to the extraction of three main themes: vaccine acceptance (lack of knowledge and awareness, lack of trust in news, advice from others), vaccine safety (unknown side effects of vaccine on the mother and the fetus/newborn), and vaccine effectiveness (effectiveness of the vaccine for the mother and the fetus/newborn).

**Conclusion** The pregnant mothers in Qom avoid COVID-19 vaccination during pregnancy due to the lack of knowledge and awareness, lack of trust in the news, and advice from others. They are also worried about the unknown side effects of the vaccine on the mother, the fetus or newborn and have no knowledge of the effectiveness of the vaccine for the mother, the fetus or newborn.

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## Extended Abstract

### Introduction

The first case of novel coronavirus was first reported in December 2019 in China. On March 11th, 2019, the [World Health Organization \(WHO\)](#) declared it as a pandemic. Considering that pregnant women are among the high-risk groups, infection in them can cause premature birth, stillbirth, dysfunction of vital organs, increased heart rate, fetal distress, premature rupture of the amniotic sac, increased rate of caesarean section, and even death. Many questions about the benefits of vaccination and its possible side effects have remained unanswered. The [WHO](#) recommended the use of Sinopharm vaccine for pregnant women, because the benefits of vaccination for them are greater than the possible risks of disease. The [WHO](#) does not recommend delaying pregnancy or terminating pregnancy because of vaccination. It is very important to conduct more studies on the effect of coronavirus vaccines on pregnant or breastfeeding women in clinical settings. This study aims to survey perceptions of coronavirus vaccination during pregnancy among mothers in Qom, Iran.

### Methods

This is a qualitative study using content analysis method. The study population consists of pregnant mothers eligible for coronavirus vaccination and referred to the gynecology clinic of Izadi Hospital for pregnancy control from January to March 2022, and had not yet received the vaccine. Sampling continued until data saturation. In this regard, 21 pregnant mothers participated in this study. The method of selecting the participants was goal-based. The interviews were semi-structured and took 25-30 minutes. To confirm the dependability of the data, an audit was performed by an observer, and the content of some interviews along with their codes were provided to him to check the data and give his suggestions and opinions. To determine the confirmability of the data, data were reviewed by the participants and an audit was performed.

### Results

The results of this study showed that Iranian pregnant mothers avoided vaccination during pregnancy due to lack of knowledge and awareness, the lack of trust in news, advice from others, worry about the unknown side effects of the vaccine, and lack of knowledge of the effectiveness of the vaccine. Therefore, it seems necessary to use educational programs to increase the

knowledge of coronavirus vaccination in Iranian mothers. These programs can include training to deal with fears and misconceptions, counseling, ensuring the safety and effectiveness of the vaccine, and encouraging them to be vaccinated. In addition, the Iranian Ministry of Health should provide the results of investigating the effects of coronavirus vaccination on pregnant mothers to the public in a documented and transparent manner. Moreover, gynecologists and midwives should remind the safety of vaccination and its necessity during pregnancy due to the special conditions of mothers and preventing the risks caused by the pandemic

### Discussion

The results of this study showed that different factors play a role in the tendency of pregnant mothers in Qom to have coronavirus vaccination. In this regard, three main categories of vaccine acceptance, vaccine safety, and vaccine effectiveness were extracted. Regarding the acceptance of vaccine, there was a doubt among some pregnant women due to the newness of vaccine, lack of information and knowledge about it, and having false information and false beliefs. In this category, there were thus three sub-categories: Lack of knowledge and awareness, lack of trust in news, and advice from others. The lack of knowledge and awareness can lead to the formation of rumors about the vaccines and the hesitation of mothers to accept vaccination. The results of a study by Skjelt et al. in 2021 showed that the strongest predictors of vaccine acceptance were: confidence in vaccine safety or effectiveness, worrying about COVID-19, belief in the importance of vaccines to their own country, compliance to mask guidelines, trust of public health agencies/health science, as well as attitudes towards routine vaccines. Recent studies have shown that the pregnant mothers who receive vaccine for COVID-19 can transfer the coronavirus antibodies to their babies, and early vaccination may protect the fetus. More research is needed to determine whether the amount of antibodies transferred to the baby is enough to prevent the baby from contracting COVID-19. Of course, the coronavirus vaccine does not provide complete immunity for people at any age or gender and pregnant mothers should comply with infection control measures.

### Ethical Considerations

#### Compliance with ethical guidelines

This study was approved by the ethics committee of [Qom University of Medical Sciences](#) (Code: IR.MUQ.REC.1400.190).

### **Funding**

The financial sponsor of this article was [Qom University of Medical Sciences](#).

### **Authors contributions**

The authors contributed equally to preparing this article.

### **Conflicts of interest**

The authors declare no conflict of interest.

### **Acknowledgements**

The authors would like to thank all participants for their cooperation.