

## COVID-19 Effects On Vaccine Hesitancy

### The Effects Of COVID-19 On Vaccine Hesitancy

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#### Author Note

Leandro Canela is a rising senior at Manhattan Village Academy who is enrolled in four AP courses including English Literature. This research was conducted for two purposes: to determine the extent that COVID-19 affected vaccination rates, and to find possible solutions to vaccine hesitancy in general. Correspondence concerning this article should be addressed to Leandro Canela, Contact: [leandrocanela0606@gmail.com](mailto:leandrocanela0606@gmail.com)

### Abstract

The rapid development and deployment of Covid-19 vaccines have been pivotal in controlling the global COVID pandemic. However, vaccine hesitancy remains a significant barrier to achieving widespread vaccination and immunization. Understanding the key factors that influence people's decisions to accept or refuse the Covid-19 vaccine, and vaccines in general, is crucial for improving public health strategies and ensuring higher vaccination coverage, not just for COVID-19, but all viruses. This research aims to explore the impact of Covid-19 vaccination's uptake on vaccine hesitancy. The study will investigate how public health campaigns, social influences, and individual thoughts of vaccine safety and efficacy contribute to vaccine hesitancy. In addition, this research seeks to identify effective interventions that can be implemented to reduce hesitancy and promote vaccine acceptance across all populations. We anticipate that this research will reveal key causes of vaccine hesitancy, such as misinformation and concerns about vaccine safety. The findings are expected to inform the development of more targeted and effective public health strategies aimed at increasing vaccination and vaccine uptake. By identifying successful interventions, this research will contribute to the broader effort to mitigate vaccine hesitancy and enhance public confidence in vaccination.

## **Introduction**

The COVID-19 pandemic, which happened in late 2019, has had global impacts on health, economies, and daily life previously unheard of. In response to this pandemic, the rapid development of COVID-19 vaccines have been seen as a 'scientific miracle', giving a necessary tool to combat the virus and return back to normal everyday life. However, the creation of these vaccines have also emphasized significant challenges, specifically regarding general vaccine hesitancy and the controversy surrounding vaccine usage.

Vaccine hesitancy, defined as the delay in acceptance or the refusal of use of vaccines despite being available, is influenced by a vast amount of factors which include individual beliefs, misinformation and concerns about vaccine safety. In particular, the COVID-19 vaccine has been subject to intense and often nuanced public discourse, driven by factors such as the speed of its development, and misinformation, whether that be about vaccine safety, or through social media influence..

This research proposal aims to assess the effect of the COVID-19 vaccine on vaccine hesitancy and the controversies that have been sparked around its uptake. Specifically, the goal is to understand how the introduction of COVID-19 vaccines has influenced public attitudes towards vaccination, the spread of misinformation, and the broader implications for public health. By addressing this information, this research aims to provide a deeper understanding of the ins and outs of vaccine hesitancy in the context of

the recent COVID-19 pandemic. This information will be collected through a multitude of methods, combining quantitative surveys to gauge public attitudes and personal interviews to gain more understanding into the reasoning and concerns of individuals in the general population. Additionally, the study will analyze social media content and social media discussions to assess the impact of misinformation and the effectiveness of public health messaging.

### **Methods**

This research will use a mixed-methods approach, combining quantitative surveys and qualitative interviews to research the impact of the Covid-19 vaccine on vaccine hesitancy in general. A diverse sample group of adults aged 18 and older will be selected using stratified random sampling to ensure representation across various demographic groups. The survey, administered online and via telephone, will include questions on demographics, vaccine attitudes, perceived risks, trust in healthcare, and sources of vaccine information. Descriptive statistics will be used to analyze the survey data, identifying predictors of vaccine hesitancy. Additionally, interviews will be conducted with a subset of survey respondents to explore in-depth the reasons behind their vaccine decisions. Thematic analysis will be employed to identify patterns in the interview data, providing a richer understanding of the quantitative findings.

To analyze the information collected from the literature, a search will be conducted using reputable databases, in this case being Google Scholar, using keywords such as 'COVID-19 Vaccine' and 'Vaccine Hesitancy'(Biswas et al, 2021). Key points will be extracted from the articles found, including methodology, results, conclusions, and possible future investigations while organizing the data for ease when comparing. When synthesizing the data, results that have to do with hesitancy when it comes to vaccines in general will be grouped, as well as results when it comes to hesitancy with the COVID-19

vaccine. Groups interviewed will also be split into groups that are more in favor of vaccines, and those who are not, to prevent further bias.

### **Discussion**

The first study talks about the drop of other vaccination rates, such as the flu, during the uptake of the COVID-19 vaccine, while the second study mentions people's willingness to receive the vaccine during the beginning of its uptake. These studies are relevant to my proposal because they mention both vaccine rates and hesitancy during the height of the COVID-19 vaccines uptake.

The Covid-19 pandemic has had a profound impact on public attitudes toward vaccines, affecting behaviors not only toward the developed Covid-19 vaccines but also toward already made vaccinations, such as the flu vaccine. Between 2019 and 2021, there was a noted 4.3 percentage point decrease in flu vaccination rates among adults aged 18 to 65, decreasing from 54.5% to 50.2%. This decline occurred during the height of the pandemic, which suggests that the hesitancy surrounding the Covid-19 vaccine may have contributed to a broader reluctance toward vaccinations in general. The similarity in vaccine hesitancy across different vaccines underscores a 'spillover' effect, where concerns about one vaccine extend to others.(Biswas et al, 2019)

However, there are also important differences in how the public responded to the Covid-19 vaccine when compared to the flu vaccine. Early in the pandemic, 59.4% of survey participants indicated a willingness to receive the Covid-19 vaccine, while 32.9% stated that they had no plans to get vaccinated. This hesitancy, while significant, also shows that a majority of the population was initially open to the idea of vaccination against Covid-19, likely influenced by

the urgency of the pandemic. In contrast, the decline in flu vaccinations could suggest that routine vaccinations were not prioritized or that concerns about the new Covid-19 vaccines might have led to a broader skepticism about vaccines overall.(Ioannis et al, 2021)

A key factor contributing to vaccine hesitancy, both for the Covid-19 vaccine and other vaccines like the flu shot, was misinformation. The prominence of misinformation as a driver of hesitancy highlights a similarity across different types of vaccines. Regardless of the vaccine, false information, often spread through social media, created doubts that undermined public confidence. The difference lies in the context: misinformation about the Covid-19 vaccine was amplified by the urgent nature of the pandemic, while hesitancy toward the flu vaccine reflected a carryover effect of these broader concerns.

These findings emphasize the inter-connectedness of vaccine perceptions and the role of misinformation in shaping public attitudes. Addressing these issues requires comprehensive public health strategies that combat misinformation and restore trust in vaccines across the board. While the pandemic has impacted attitudes toward the Covid-19 vaccine, the decline in flu vaccination rates suggests that public health campaigns must also focus on reinforcing the importance of routine vaccinations in maintaining overall community health.

### **Conclusion**

This research proposal seeks to investigate the multifarious issue of vaccine hesitancy in the context of the Covid-19 pandemic. By utilizing multiple methods in the research that combines quantitative surveys and qualitative interviews, this study aims to highlight both the prevalence and the underlying causes of vaccine hesitancy across global populations. Understanding these

factors is crucial for developing targeted interventions that address the specific concerns, fears, and misconceptions that contribute to vaccine hesitancy.

The insights gained from this research are expected to have significant possible implications for public health policy and practice. By identifying the key causes of vaccine hesitancy, such as misinformation about vaccines and concerns about vaccine safety, we can design more effective communication strategies. These strategies may include more tailored messaging, community engagement, and social campaigns to rebuild trust in vaccinations in the future. The findings will provide evidence on vaccine hesitancy that can enhance the effectiveness of vaccination campaigns, not only for Covid-19, but for future public health initiatives as well.

Ultimately, this research aims to contribute to the effort to reduce vaccine hesitancy and increase vaccination rates in general. By addressing the causes of hesitancy and promoting vaccine acceptance, we can improve public health and ensure stronger protection against future infectious diseases, like COVID-19 was. The knowledge generated from this study will be valuable for public health professionals, and researchers working to combat vaccine hesitancy and enhance the resilience of communities facing current and future health challenges.

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