**Effectiveness of Face Masks in the Context of COVID-19**

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Author Note

A thank you note (optional).

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# Introduction

According to the World Health Organization(WHO), COVID-19, which became a global outbreak of coronavirus at the end of 2019, is an infectious disease caused by the severe acute respiratory syndrome coronavirus 2 viruses. The influence of COVID-19 can be observed everywhere in daily life, from the limited number of international airlines to the regular nucleic acid test. In short, COVID-19 nowadays is the most serious and widely spread healthy event.

In the absence of widespread vaccination campaigns or targeted antiviral medication, masks seem to be the solution to prevent communicable disease transmission (Tam, Tam, Law, Khaw, & Lee, 2021). One of the public health methods used to reduce the spread of COVID-19 and one of the key factors in limiting its transmissibility was community mass masking. Some regions' ineffective infection control efforts may be due to the method's initial lack of general adoption.

However, though there is evidence of how a mask can prevent the spread of COVID-19, there are arguments on whether mask works (Wang, Pan, Tang, Ji, & Shi, 2020). Wang et al claimed in their paper that there is no universal agreement among cultures about the effectiveness of wearing a mask as a physical intervention against disease transmission in the context of COVID-19. In other words, there is another problem which is, to what extent, can mask prevent airborne transmission of COVID-19? Specifically, if face masks are beneficial in preventing SARS-CoV-2. To test the spreadability of the infectious droplets and the effectiveness of different types of face masks in preventing the spread, Ueki et al. created an airborne transmission simulator of the infectious SARS-CoV-2 virus (Ueki, et al.).

In the present paper, I will discuss the effectiveness of the face mask in the prevention of communicable disease transmission. To this end, the main method used in the present paper is to conduct a simple literature review, find the previous research works, and then investigate their achievements and drawbacks. Then, I will test a scientifically defensible opinion based on previous studies and my rationale. Finally, I will give my own opinion about the effectiveness of the face mask and how to use it correctly.

# Methods

In the present paper, there will not be any experimental study. Instead, all the excavation on the research topic is the literature review and some logical deduction.

# Results

Some people agree or disagree with the idea that the face mask can prevent the spread of COVID-19.

People wearing masks, according to supporters, will inevitably show that they are aware of the potential infections. The transmission of respiratory droplets, a concoction of virus particles, water, and other expiratory secretions, can then be effectively stopped by using a mask. Because of their size, most masks—whether they are worn properly or not—effectively capture a sizable portion of these droplets. The physical barrier of masks prevents COVID-19 from being sent; they act as a speed bump on the transmission highway. In other words, the mask can filter out particles traveling from others toward you in the opposite direction. And it needs to be understood that a medical mask, like the N95, could offer much better protection against the spread of contagious diseases. In addition, as mentioned in earlier research, a study on the effectiveness of cloth masks versus medical masks in the setting of viral infections in hospital healthcare workers concluded that cloth masks do not offer as much protection as medical masks. Cloth masks had a much higher rate of laboratory virus confirmation than medical masks or groups who did not wear any masks (Szarpak, Smereka, Filipiak, Ladny, & Jaguszewski, 2020).

However, there will certainly be some people who do not believe that the face mask is useless, or at least, not as effective as it would be thought to be. First of all, the effectiveness of the face mask might be influenced by a lot of factors, and not all masks will be suitable for everyone. For example, the size of different people’s faces might be different, and a regular face mask might not be able to cover the whole face. Besides, people would have different shapes of faces, which means, the prevention function of the face mask might not be able to work properly.

Another strong piece of evidence showing that the face mask might not be so powerful is that assume that the mask is so effective, then why are there still so many COVID-19 cases? Together with the social distance, masks seem to be the most popular weapon in the war against COVID-19, however, there are still so many COVID-19 cases. There are still no valid comparisons using population data because of the lacking of detailed information, for example, the age, the co-morbidities, and exposure, of the people who participated in the survey.

# Discussion

Then I will briefly discuss why the mask’s effectiveness still yet remains unknown.

There is no universal agreement among those who think masks are effective at preventing the spread of contagious diseases. And despite valid and reliable experiments, the relationship between the mask and COVID-19 cases is still not entirely clear.

I'll therefore remain receptive to any notion supported by science for the time being. However, I believe we must infer that people covering their mouths and noses when coughing and sneezing, washing their hands, and avoiding contact with or exposure to transmitters by maintaining a social distance were the main reasons why fewer people died from COVID-19 in the years after the pandemic. The propagation of a respiratory virus has been greatly slowed by these actions. Non-pharmacological therapies are at least effective, and they are significantly more so when combined with immunization.

# References

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# **Table 1 –** Title

# Figure 1. Title