

Society Versus Stigma: Positive Social Recontextualization of Face Masks to Mitigate COVID-19

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Abstract

COVID-19 is undoubtedly a global issue to public health and mental wellbeing, but many may overlook the fact that preventing COVID-19 transmission also qualifies as a social issue. This paper begins by defining COVID-19 as a social issue that discriminates against the immunocompromised, emphasizing the magnitude of the problem beyond its immediate biological effects and the need for a social solution. Then, it introduces current mitigation methods—including masks, vaccines, and other methods—and reviews their efficacies and social implications (stigma) as found by previous research. It concludes that masks, when compared to vaccines (which may actually further the discriminatory nature of COVID-19), are the more socially viable solution; yet, the only obstacle hindering their implementation is the stigma resulting from their connotation of social abnormality. This stigma, however, is not unbreakable; the connotation of sickness masks carry is more likely to dissipate compared to that of vaccines (which will inevitably stay associated with the pandemic and stigma). This paper advocates that the destigmatization of masks has the potential to become the most effective force against COVID-19 in the United States, and that this goal should be achieved by recontextualizing masks in a positive light—as a method of fashion and self-expression, rather than a sign of sickness and social abnormality—to encourage more people to mask up against COVID-19 by their own will and influence others to follow.

Introduction

Contrary to prevailing beliefs, the COVID-19 pandemic is far from over. Recent wastewater data from the CDC show that the United States is experiencing another wave of COVID-19 viral activity early 2024 [1]. But why is this happening? Why, after four years and repeated emphasis on COVID-19 safety measures, has the pandemic reached this juncture? Public attention on the pandemic has waned as global mitigation programs create the false sense of security that COVID-19 no longer poses a threat to public health. For a significant minority, the threats posed by COVID-19 have persisted unabated. Bearing in mind COVID-19's persistence as

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a problem, society must dedicate the attention to the pandemic that it will require. After all, humans are social creatures; it is only natural that COVID-19, a communicable disease, is thus a social issue that discrimination of marginalized groups unfortunately accompanies. According to AstraZeneca, a pharmaceutical company dedicated to combating COVID-19, “immunocompromised individuals” still suffer a “substantial and disproportionate burden” from COVID-19 [2]. Our society may not readily perceive the discriminatory burden imposed on immunocompromised individuals by the ongoing pandemic. Unlike the visible struggles faced by those with a physical handicap the harm inflicted on immunocompromised individuals often occurs unnoticed. While a person in a wheelchair struggling to navigate stairs draws attention to the challenges of the disabled, an individual with underlying health conditions falling seriously ill due to negligence regarding public health measures may suffer in silence, often relegated to hospitals or confined to their homes. In essence, we discriminate against the immunocompromised by abandoning measures that stop the spread of COVID-19 in favor of vaccines and legal measures that simply stop the symptoms. COVID-19, therefore, emerges as a discriminatory issue, affecting some members of society more than others even after the peak of the pandemic. Still, this visible discriminatory impact only touches the surface of the social effects of COVID-19. In a broader sense, COVID-19 is a social issue simply because society itself is at the root of its spread and its effects. Yet, despite being the cause of COVID-19’s spread, society also has the power to contain it and remedy its mistakes. Since the peak of the pandemic is already a relic of the past, mandates and strict regulations may only create more backlash than necessary; instead, COVID-19 must be addressed as a social problem using social methods due to its disproportionate effects on certain populations and stigma around its solutions, including both vaccines and masks (with the latter having a social advantage). Particularly, destigmatizing masks and reframing them in a positive light will allow for a passive approach to reducing the strain of COVID-19 on the general population and immunocompromised individuals alike in the United States.

Literature Review

Masks as a Current Measure

As previously established, a widely adopted COVID-19 mitigation measure in the United States is the use of face masks, which “serve as a physical obstacle to respiratory droplets,” thus preventing transmission of respiratory diseases [3]. One study proves the efficacy of specialized masks, stating that N95 masks reduce viral transmission by over 95% when worn by individuals infected with COVID-19 [4]. Notably, N95 masks are not the only available type of mask; surgical and fabric masks have also seen use with significant but slightly less optimal results, blocking over half of viral transmission [4]. While not as desirable as an N95, these cheaper and more customizable alternatives will adequately protect wearers, especially if other precautions such as proper ventilation or remaining outdoors are followed. Furthermore, while certain segments of the population are exempted from wearing masks as recommended by the CDC—namely, children under 2 years of age, individuals with breathing difficulties, and those unable to don or remove masks—this demographic represents a relatively small minority [5]. This finding has not posed a major obstacle to masks as a solution, as the majority of the population remains capable of wearing masks and can compensate for those unable to do so.

More specifically, masks have been implemented using government mandates in several states during the peak of the pandemic. A study examining the effectiveness of mask mandates across 15 states observed that “rates [of infections] were growing before the mandates were enacted and slowed significantly after, with greater benefit the longer the mandates had been in place” [6]. Similarly, another study postulates that “the number of COVID-19 cases would decrease in [...] severely affected [areas] under the current approach of relying primarily on social distancing and mask use” [7]. In both cases, the adoption of masks drastically decreased the number of infections from COVID-19. It is important to note that mandates are a legal approach rather than a social one and as governments ease restrictions, mandates may become a relic of the past. Nevertheless, the benefits derived from mask wearing can be realized if people simply decide to wear masks again.

Despite being effective when masking is widely adhered to, one of the main challenges to face masks is the stigma surrounding them. Research

indicates that individuals are “less likely to wear facemasks during the COVID-19 pandemic when they perceive facemask stigma” [8]. Some may also “refuse to wear masks for their convenience” or “consider mask wearing a nuisance” [9, 10]. Additionally, a study on the usage of masks in the absence of a mandate noted that “face masks were perceived as a symbol of social disruption” by many, leading to potential stigmatization of those who continue wearing masks when the public perceives the pandemic as largely resolved. The same study concluded that to most, “face masks were perceived acceptable only temporarily,” and in many areas, face mask mandates are obeyed only when virus spread is at its highest [11]. Despite the proven and intuitive benefits of wearing masks to prevent spread, the stigma of wearing a mask has reached a point where individuals choose to avoid wearing a mask due to the surrounding stigma, despite putting themselves and others at greater risk of becoming infected.

The perception of masks in society is not one-sided, however. Even as stigma is present in the general public, for influencers, “the simple act of wearing a mask can be a powerful tool” that increases perceived competence [10]. Influencers that wear masks are thus more likely to leave a professional impression on audiences, who in turn may associate mask wearing with their preferred influences, making them more likely to decide to wear a mask. Perhaps another relevant example for the psychological benefits of masks is seen in China, “where mask wearing is mostly a public-health issue rather than a political issue” [12]. Extensive evidence suggests that masks serve as a moral symbol in Chinese society, fostering heightened moral awareness and reducing deviant behavior among wearers [12]. The contrasting contexts surrounding regular mask usage in China, where it has been commonplace since the 1900s, and in the United States, where it was abandoned after the 1900s, underscore the potential for valuable insights to be gleaned from a country where mask-wearing is deeply entrenched as a social norm [12].

Other Current Measures

Another notable method adopted by governments for COVID-19 mitigation is the vaccination. With promising efficacy rates comparable to masks, Chirico et al. report through a “systematic review” that vaccines convey “80-90 percent...efficacy against symptomatic and asymptomatic infections in fully vaccinated people” [13]. Despite benefits, vaccines are not

universally suitable; some individuals may be allergic to the compounds present in vaccines. In a survey of over 50,000 healthcare employees who received the vaccine, “2% experienced allergic reactions, and anaphylaxis occurred at a rate of 2.47 per 10,000 individuals” [14]. Further, “in people who are immunocompromised, the immune response to vaccination may be blunted” [15]. While this information should not be taken as a rallying point against vaccines, rare adverse effects from vaccinations bring up a genuine concern. Individuals affected by adverse reactions to COVID-19 vaccines may find themselves at a biological and social disadvantage, as they are left with diminished defenses against the disease and may become associated with the stigma surrounding vaccine avoidance.

Nevertheless, vaccine mandates have demonstrated notable success in “reduced estimated hospitalizations” that saved “thousands of lives” when implemented [16]. However, as governments lean purely on mandates to promote vaccination, controversy inevitably arises. “Vaccination policies” have been known to provoke “backlash, resistance and polarisation”, as denying care on the basis of vaccination is “arguably in tension with constitutional and bioethical principles” [17]. While government mandates are not the primary focus of this paper, the social repercussions of vaccine mandates may apply to vaccines as a whole, as the widespread implementation of mandates leads many individuals to associate vaccines with mandates.

While masks and vaccines stand out as the most widely recognized COVID-19 mitigation measures evident in the United States, other strategies such as physical distancing and personal hygiene are also crucial components of prevention efforts [18]. These methods, while prominent and widely recommended, do not tend to provoke societal backlash. Thus, there are fewer obstacles in the way of their implementation compared to those of masks. Consequently, they require less discourse and debate.

Employers, in particular, have been urged to adopt various measures by OSHA, including facilitating vaccination, providing face coverings, and instructing exposed employees to stay at home, as of June 2021 [18]. Evidently, these recommendations are often loosely enforced, with many workplaces prioritizing profit over stringent adherence to safety protocols as of 2024. Overall, these methods serve to support other methods but cannot be relied solely upon, which is why stronger methods such as masks must be reevaluated for use.

Discussion

Superiority of Masks as a Solution

Through careful evaluation of the societal effects and drawbacks of both masks and vaccines, masks emerged as the optimal solution best suited to the current state of COVID-19 pandemic. The past success of mask mandates suggests that society possesses the capacity to enact change for the sake of COVID-19 prevention; the only difference now is that society must do so because it feels a need to, rather than being compelled by the government. Biologically, masks seem to be the most formidable solution when their capabilities are considered: they almost create an ‘isolation-on-the-go’ effect, allowing users to block viral particles and reduce spread without having to completely isolate themselves.

Foremost, masks present significantly fewer societal issues compared to vaccines (which may further the discriminatory nature of COVID-19 too much to be the main solution). Notably, vaccines exhibit varying levels of efficacy across different segments of the population. As previously mentioned, immune response to vaccines is lower for the immunocompromised population [15].

While vaccines are intended to protect those most vulnerable to the virus, they provide diminished benefits to this population, underscoring the limitations of vaccines in addressing disparities. The existence of individuals allergic to the vaccine furthers the discriminatory nature of vaccines. Those who have allergies to the vaccine are commonly discriminated against, even in the workplace; many employers “view mandated universal employee vaccination as a way to keep their workplaces safe and mitigate their financial losses” [19]. In contrast, face masks lack such discriminatory limitations on usage; nearly anyone can wear a mask and derive equal benefits, regardless of their health. As long as a mask forms a complete seal over one’s face, COVID-19 particles will be blocked no matter the state of the individual’s immune system. Overall, while vaccines offer proven biological benefits, these benefits do not hold up when compared to masks. Discussion of vaccines will inevitably lead to more “backlash, resistance and polarization” [17], especially considering that masks convey similar benefits without as much resistance or discrimination.

Moreover, the impact of each person wearing a mask might be greater than initially perceived. If an individual is unaware of their COVID-19 sta-

tus and chooses to wear a mask, they would potentially shield every single person they make contact with by masking. While vaccines could theoretically prevent spread by preventing infection in the first place, masks have a more visible benefit, providing a physical barrier against spread. Observing others wearing masks may prompt individuals to adopt mask-wearing themselves, thus amplifying the collective protective effect. In contrast, vaccination status is not readily discernible, making it less influential in shaping behavior through social cues.

It must be noted that while both masks and vaccines can not be implemented into everyone's lives, the effects of an inability to use vaccines are much more detrimental than if someone can not use a mask due to the nature of each mechanism's use; the benefit of vaccines primarily focuses on mitigating the effects that the vaccinated individual may experience upon contracting the virus, thus leaving those unable to receive vaccination significantly vulnerable to the symptoms of COVID-19. Vaccines were found to have a modest effect on viral transmission, with each subsequent dose of the COVID vaccine resulting in "an additional average 11% relative reduction in infectiousness" [20], but their primary purpose is to limit the effect of a disease on the body; in turn, vaccines become an individual decision, based on personal protection. As a result, people who can not receive this treatment are at a disadvantage and will bear the brunt of COVID's symptoms unprotected. Contrastingly, face masks are specifically designed to limit transmission, yielding staggering results that are exceedingly better than vaccines. Thus, their purpose becomes communal. Even if an individual is unable to wear a mask, they can still interact with others who do wear masks, providing some level of protection against transmission. As a result, widespread mask usage is able to account for the small minority of those who are incapable of masking by decreasing overall transmission more effectively than vaccines.

Overall, extensive evidence supports masks as a superior solution to combating COVID-19 compared to vaccines, particularly due to their societal advantages. If masks are not seen as an abnormality or something that must be used only when ordered, advocacy of masks can be spread among the common people by themselves without the interference of a higher power. This ability of masks to be disseminated among the masses rather than imposed from above makes it a more appealing mode of disease control when considering vaccines are distributed and coordinated by government agencies, leaving no room for action by the public. Even though

side effects of masks exist, as with any solution, perhaps these can be mitigated by implementing social change in lieu of mandates. Mistrust of government is associated with any legislative action toward disease prevention, so it is up to each person to make informed decisions regarding public health. Society is given the responsibility of choice and has the power to support or squash aspirations for the public to see masks as an individual, healthy benefit and not a decision of desperation or paranoia. Stigma stands as the primary obstacle in the way of widespread mask usage, and society must address this stigma from the root before using the solution.

How to Break Mask Stigma

Since society currently lacks urgency about integrating face masks as a part of daily life and continues to grapple with mask-related stigma, mask-wearing must be promoted through new ways that make masks more desirable to wear. This task presents challenges, as masks have become synonymous with the pandemic, being worn only out of necessity. However, subtle shifts in messaging can make a significant difference. Rather than emphasizing the necessity of masks for disease control and demanding compliance with guidelines, efforts should focus on highlighting the lesser-known benefits of masks. If face mask stigma is a problem because masks carry a negative connotation, perhaps a solution to this stigma is to employ methods that make the majority of the population perceive masks positively; highlighting these lesser-known benefits may just achieve this.

Modern research generally agrees that most people feel opposed to wearing face masks because they evoke a feeling of “social disruption,” being a symbol of sickness and abnormality [11]. After all, people are used to seeing masks worn as a response to a sudden increase of cases in a location or when the wearer becomes ill [21]. By addressing the root cause of this association, namely the connection between social disruption/sickness and stigma, we can potentially break the stigma surrounding masks. One way that some companies have begun to recontextualize masks is by making them into more of a fashion symbol rather than a protective medical device; after all, masks do cover half of the face, aesthetically hindering a person’s look. Companies could potentially utilize advertisements and influencers to normalize mask usage and integrate masks into everyday lifestyles. In fact, Forbes reports that similarly to how jeans transformed from work-wear to a fashion choice, masks are also “quickly becoming an everyday

fashion accessory.” The article highlights twenty brands that are experimenting with the inclusion of masks as a fashionable addition to clothing lines [22]. Even beyond the realm of luxury fashion, face masks featuring aesthetically pleasing patterns have become readily accessible in the general market. Countless options are now available online platforms with a simple search. With the widespread availability of masks that do not evoke a context of sickness and abnormality, more people’s negative associations with face masks will begin to wane.

Elaborating further on the fashionable aspect of masks, Lu et al. speculate that “personalized masks... are personal symbols rather than moral symbols,” providing an example: “a mask with the logo of someone’s favorite band may primarily activate cognitions about the band rather than the moral meaning of masks” [12]. While this assertion requires further research, it may point to another method for promoting mask usage. Individuals routinely express themselves through personal symbols in their attire, accessories, and even body modifications. If face coverings become another means of self-expression, people may be inclined to wear them more frequently for this reason alone, with protection against COVID-19 serving as a secondary benefit. This change in motivation fosters a positive context of self-expression rather than a negative context of illness surrounding masks. As previously mentioned, many brands already sell visually appealing masks. If these masks were to become commonplace in the United States, more individuals might embrace them as another fashion medium. This recontextualization effectively addresses the social stigma surrounding masks, removing the primary barrier to widespread adoption. Moreover, as more people begin to adopt masks as fashion, other people who meet them (even in brief interactions) are likely to notice the change and subconsciously change their perceptions, leading to an exponential spread of positive sentiment. The necessity of this paradigm shift towards acceptance of mask usage can not be overstated. Maintaining the assumption that masks are connected to health issues, whether it be societal ones of pandemics or personal ones like being ill or immunocompromised, makes people assume something must be wrong with someone for them to wear a mask. This discrimination of COVID can be easily alleviated by widespread mask usage, alleviating stigma to immunocompromised people because they would no longer be the only ones constantly using masks.

The superiority of masks as a solution is furthered when the ease of eliminating stigma is considered; it can be lowered simply by making masks a

fashion symbol. Unlike vaccines, which inherently carry a medical connotation and are unlikely to undergo a contextual shift, masks have the potential to be transformed into expressions of personal style. Vaccines evoke associations with pandemics and abnormal times while also broadening the gap between healthy and immunocompromised populations, masks have the potential to evoke feelings of self-expression and level the playing field for immunocompromised people. This benefit can be realized if masks are marketed as a method of self expression and aesthetically pleasing masks are sold more often in stores to reach a wider market. This method does not aim to achieve total mask adherence in the population; rather, it seeks to slightly curb COVID-19 with virtually no backlash since nothing is being mandated. This passive approach is best used in the modern day as it would be socially unfavorable to treat COVID-19 as a severe disruption again.

Conclusion

Limitations

Despite the advantages of masks as a solution, practical and social limits persist. Firstly, they will only work at their highest efficacy if everyone wears high quality, well-fitting masks. For a mask to convey full efficacy, people must also ensure that it is a good fit; “if a mask is not completely sealed around the edges of the wearer,” the mask may not convey full efficacy and “may create a false sense of security” [23]. Additionally, a small minority of the population may be advised against masking. Further, while the promise of a healthier society made safer by an extensive acceptance of face masks is entirely feasible, there are additional societal pressures that may limit the expanse of these improvements. The essentially untapped social power for good contained in social media influencers can sway public opinion to be more content with widespread mask usage as the norm rather than a temporary occurrence, but celebrities with massive followings can produce the opposite effect. Even today, the public sees mouthpieces against mask requirements and recommendations influence substantial portions of the population to confront perceived power moves by government actors. Not everyone will follow along the path of streamlined disease prevention, but by flipping the narrative to make masks the norm, the public will produce a societal pressure on the small yet prominent minority of

those refusing to don a face mask to participate in the group effort against the proliferation of the pandemic. Furthermore, molding public opinion is a difficult undertaking, and will require combined effort from advocates of this change and everyday members of society, as it is their openness to adapt that will drive the addition of face masks to typical social interaction.

Implications

Importantly, this paper does not serve to discredit vaccines as a solution, despite arguing that masks are a socially superior solution. Rather, it emphasizes that vaccines should not be the main solution that comes to the minds of the general public when COVID-19 is mentioned, since vaccines will never shed their societal context of sickness. Masks can be easily recontextualized as positive symbols of self-expression, allowing them to become more utilized throughout society and limit spread of disease when they are viewed as something other than medical equipment for use in pandemics. With positive recontextualization of masks, society can fully reap the benefits of the ‘isolation-on-the-go’ effect that masks provide without the side effects of government mandates, and even gain an entertaining new fashion choice. This fashion choice, whether in the form of a simple cloth mask or a high-quality KN95, will weaken mask stigma regardless of the mask’s immediate efficacy as long as the choice of masking becomes normalized. The benefits of defeating mask stigma extend beyond immediate benefits of increased masking; a positive view on masks may even protect immunocompromised populations by allowing them to protect themselves without being judged. If society can bring itself to overcome the stigma surrounding face masks for good, when combined with other important and noncontroversial measures, masks will become the unstoppable force that will protect disadvantaged populations and slow down COVID-19 for good.

References

1. *Wastewater COVID-19 National and Regional Trends* <https://www.cdc.gov/nwss/rv/COVID19-nationaltrend.html>. 2024.
2. *The continued burden of COVID-19 for the immunocompromised* <https://www.astrazeneca.com/what-science-can-do/topics/covid-19/burden-of-disease.html>. 2024.

3. Das, S. *et al.* A comprehensive review of various categories of face masks resistant to Covid-19. *Clinical epidemiology and global health* **12**, 100835 (2021).
4. Ueki, H. *et al.* Effectiveness of face masks in preventing airborne transmission of SARS-CoV-2. *MSphere* **5**, 10–1128 (2020).
5. Dorfman, D. & Raz, M. *Mask exemptions during the COVID-19 pandemic—a new frontier for clinicians* in *JAMA Health Forum* **1** (2020), e200810–e200810.
6. Brooks, J. T. & Butler, J. C. Effectiveness of mask wearing to control community spread of SARS-CoV-2. *Jama* **325**, 998–999 (2021).
7. Shen, M. *et al.* Projected COVID-19 epidemic in the United States in the context of the effectiveness of a potential vaccine and implications for social distancing and face mask use. *Vaccine* **39**, 2295–2302 (2021).
8. O’Brien, C. E., York, J. D., Righetti, A. R., Bikos, L. H. & Wang, K. T. # MaskMadness: The contributions of facemask stigma, republican voting, and COVID-19 case rates to mask-wearing and affective well-being. *Stigma and Health* (2023).
9. Shang, N. “Wearing a mask or not” goes beyond a public health issue in the US. *Cogent Medicine* **8**, 1950305 (2021).
10. Klucarova, S. Do masks matter? Consumer perceptions of social media influencers who wear face masks amid the COVID-19 pandemic. *Applied Psychology* **71**, 695–709 (2022).
11. Zimmermann, B. M., Eichinger, J., Schönweitz, F. & Buyx, A. Face mask uptake in the absence of mandates during the COVID-19 pandemic: a qualitative interview study with Swiss residents. *BMC public health* **21**, 1–10 (2021).
12. Lu, J. G., Song, L. L., Zheng, Y. & Wang, L. C. Masks as a moral symbol: Masks reduce wearers’ deviant behavior in China during COVID-19. *Proceedings of the National Academy of Sciences* **119**, e2211144119 (2022).
13. Chirico, F., da Silva, J. A. T., Tsigaris, P. & Sharun, K. Safety & effectiveness of COVID-19 vaccines: A narrative review. *Indian Journal of Medical Research* **155**, 91–104 (2022).

14. Cunningham, J. *Real world data reveal risks of allergic reactions after receiving COVID-19 mRNA vaccines* <https://www.massgeneral.org/news/press-release/real-world-data-reveal-risks-of-allergic-reactions-after-receiving-covid-19-mrna-vaccines>. 2021.
15. *Special Considerations in People Who Are Immunocompromised* <https://www.covid19treatmentguidelines.nih.gov/special-populations/immunocompromised/>. 2024.
16. Drew, L. Did COVID vaccine mandates work? What the data say. *Nature* **607**, 22–25 (2022).
17. Bardosh, K. *et al.* The unintended consequences of COVID-19 vaccine policy: why mandates, passports and restrictions may cause more harm than good. *BMJ Global Health* **7**, e008684 (2022).
18. Of Labor, U. D. *Protecting Workers: Guidance on Mitigating and Preventing the Spread of COVID-19 in the Workplace* <https://www.osha.gov/coronavirus/safework>.
19. Rothstein, M. A., Parmet, W. E. & Reiss, D. R. *Employer-mandated vaccination for COVID-19* 2021.
20. Tan, S. T. *et al.* Infectiousness of SARS-CoV-2 breakthrough infections and reinfections during the Omicron wave. *Nature Medicine* **29**, 358–365 (2023).
21. Wada, K., Oka-Ezoe, K. & Smith, D. R. Wearing face masks in public during the influenza season may reflect other positive hygiene practices in Japan. *BMC Public Health* **12**, 1–6 (2012).
22. Rabimov, S. *20 Fashion Brands Getting Most Creative With Coronavirus Face Masks* <https://www.forbes.com/sites/stephanrabimov/2020/04/27/20-fashion-brands-getting-most-creative-with-coronavirus-face-masks/?sh=7c8c6d307599>. 2020.
23. Freeman, C. *et al.* Do they really work? Quantifying fabric mask effectiveness to improve public health messaging. *International Journal of Environmental Research and Public Health* **19**, 6372 (2022).