

Mandatory Mask Wear as an Effective Public Policy After Covid-19 Pandemic: A Conceptual Study

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<p>Article history Submitted: 20 December, 2022 Revised: 10 January, 2023 Accepted: 24 January, 2023</p>	<p>Abstract COVID-19, also known as the coronavirus disease, is a highly contagious illness caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The virus was first identified in Wuhan, China in December 2019 and has since spread globally, causing a worldwide pandemic. The virus is primarily spread through respiratory droplets that are expelled when an infected person talks, coughs, or sneezes. It can also be spread by touching a surface or object that has the virus on it and then touching mouth, nose, or eyes. To prevent the spread of COVID-19, public health authorities have recommended a number of measures, such as wearing masks, physical distancing, hand hygiene, testing, and contact tracing. Vaccination is also recommended as an important measure to control the pandemic. In the period after COVID-19, it is recommended to keep wearing mask especially in the crowded area.</p>
<p>Keywords: <i>COVID19</i> <i>Public Policy,</i> <i>Mask</i> <i>Pandemic</i></p>	

1. Introduction

Coronaviruses which known as COVID-19 could be defined as the wide group of viruses that cause different of serious diseases such as the severe acute respiratory syndrome [1]. This virus had recently the global attention due to the high mortality and its relationship with thromboembolic diseases [2]. Generally, it was reported for the first time from Wuhan, China and then spread vastly to every region to become a global pandemic that cause serious impacts of various sectors including International Politics and economy, Scientific developments, and global relations among the nations [3]. Furthermore, this pandemic led to disrupted of numerous productive activities around the world and caused border closures which resulted in sharply increasing of unemployment and reduce products and services demand [4].

However, due to the high impacts of COVID-19 on human life, various restrictions of movement and social distancing measures had been developed and implemented worldwide to reduce its risks and control its transmission [5]. Moreover, [6] had indicated that it is a necessary to empower public information of COVID-19 epidemiology where Medical profession individuals could help in educating others about the virus and the way of communication with health care providers in order to control virus outbreak. In addition, there are various ways could be applied to limiting the virus spreading at countries with low prevalence such as identifying the cases, carrying out contact tracing, quarantine and isolate, restricting of gathering, and restricting non-essential travel [7]. In addition, during the impossibility of mitigating the susceptible individuals by vaccination strategies, actions of social distance to reduce the spreading of epidemic with developing of public policies to protect people from the virus are urgent actions to be applied [7].

Furthermore, there are some critical initial steps for preparation process to face trouble diseases such as management agencies should develop enhanced anti-pandemic disease preparedness measures and plans by promotion of behavioral changes and risk management decision-making procedure improvements [8]. Also, due to the lack of effective treatment, prevention is the solution the to mitigate the impact of COVID-19 which could be obtained by applied some measures such as face masks, using tissues for coughs and sneezes, cleaning hands regularly, avoiding contact with infected persons, and maintain a distance from people [9]. In addition, when the compliance is high, using public mask wearing is considered as the most effective way to stop virus spreading where it is necessary that public officials and governments should encourage using masks in public with an appropriate regulation [10].

During the absence of restrictions, an isolation from people who had affected by the virus is the solution to curtailing transmission [5]. While [6] had recommended that it is an essential to assess people knowledge and awareness about the need of prevalent infectious diseases such as information of prevention and controlling diseases. Moreover, in a place with high transmission, it is an important to apply some actions such as ensuring of physical distancing, restricting the size of gatherings, recommending social bubbles, protecting vulnerable populations and implementing face mask policies are all appropriate [11].

Additionally, according to [12] who had mentioned that face masks could offer some degree of protection from versus while, studies of its effectiveness are relatively limited and no studies to date had investigate their efficiency against SARS- COV-19 transmission. According to [10] for policymakers need urgent guidance on masks usage by the general population as a tool in combating the virus causes. It had also recommended by the study that health authorities must offer a clear and implementable for mass production process to increase the compliance and help communities to reduce spreading of the virus.

It is important to understand that the evidence of the benefit of using a face masks to protect others is weak and the effect is likely to be small, therefore face coverings are not a replacement for the other ways of managing risk, including minimizing time spent in contact, using fixed teams and partnering for close-up work, and increasing hand and surface washing [13]. It had found that only weak evidence for wearing a face mask as an efficient hygienic tool to prevent the spread of a viral infection where the use of face masks seems to be linked to relevant protection during close contact scenarios [14].

For conducting the study successfully, some questions should be constructed based on the study literature review, gabs and weaknesses with regards to the study objectives that concentrate on investigation of the public acceptance for masks wearing, determination of manufacturing non-medical masks standards, and develop a guidelines for individuals to manage their masks wearing. The proposed questions are as follow.

1. What is the level of public acceptance of mandating masks wearing that had used to mitigate COVID-19 spreading?
2. How could a non-medical masks produced regarding standards and regulations within consideration of the important performance parameters?
3. How individuals could be guided for an appropriate method of viewing masks as an effective public policy to combat covid-19 pandemic?

2. Methodology of Study

The methodology of this study is based on a quantitative research approach that will be carried by adaption of online-based survey. The study data will be collected in two different stages. Secondary data will be obtained through the literature review among previous studies, while primary data will be collected among selected respondents at the university as shown in the figure below that illustrate the entire methodology of the study.

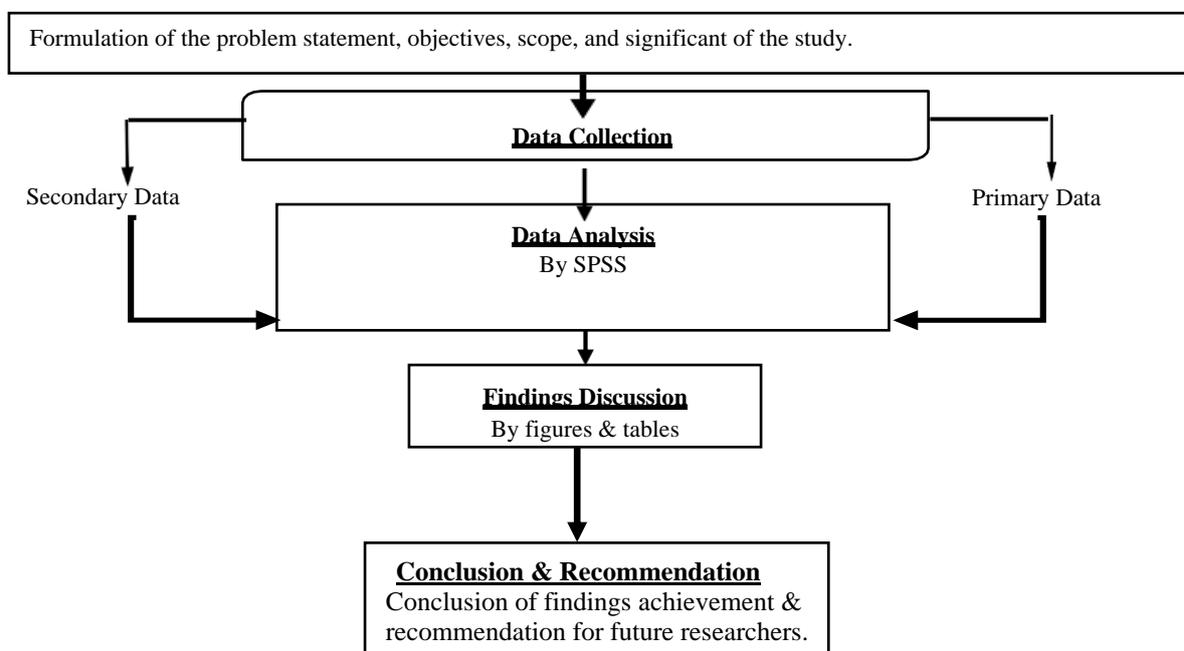


Figure 1: The overall flowchart of the research methodology

3. Significance of Study

Generally, this study concentrates on investigation of people acceptance level of mandatory mask wearing as an effective public policy to prevent spreading of COVID- 19, determination of the regulations of producing non-medical masks under essential performance parameter, and guide people of managing their use of masks. By conducting this study, various information and knowledge of combating COVID-19 pandemic will be collected throughout deeply reviewing of several of previous studies. Also, reaching wide range of people will be occurred during carrying this study and obtained their suggestions, opinions, and different points of views of using masks wearing as public policy to restrict spreading of COVID-19.

Moreover, conducting this study will be an appropriate chance to guide individuals to contribute to prevention spreading of the virus. This study offer high understanding of producing standardized and regulated non-medical masks with an adequate performance and efficiency and guide people of how they could manage their uses of masks especially in public areas. Furthermore, the study will be a useful references for future academic purposes that concentrating on mandate masks wearing as public policy to stop the virus.

Wearing a mask is important because it can help to reduce the spread of COVID-19, especially in situations where physical distancing is difficult to maintain [15]–[17]. Masks can help to prevent the spread of the virus by trapping droplets that are expelled when an infected person talks, coughs, or sneezes. This can help to reduce the risk of transmission to others, especially in crowded indoor spaces, on public transportation, and in areas with high transmission rates [18]–[20]

Masks can also help to protect the wearer from inhaling droplets that may contain the virus, which can help to reduce the risk of infection [21]–[23]. Wearing a mask is not a substitute for other important public health measures, such as physical distancing, hand hygiene, and testing and contact tracing, but it can be an additional layer of protection that can help to slow the spread of the virus and protect public health. It is important to note that the use of masks should be guided by public health authorities and should be based on the best available scientific evidence [14], [24], [25].

4. Expected Results of Study

The study aims to investigate the level of people acceptance of mandating face masks wearing, determination of non-medical masks producing for better performance, and developing of a conceptual framework that enhance people for successfully managing their usage of masks in public areas. Due to that, current study will involve a deep literature reviews from previous researches and studies to achieve an adequate information and data that are mainly related to the main study aim of mandating masks wear as an effective public policy to stop the virus spreading.

This study will be conducted by implementing a quantitative research approach by distribution an online-based survey among the target respondents who will be selected probably based on their knowledge of the various and their positions of decision making of the standardized and regulated of mandating masks wear as an effective public policy.

Previous studies have shown that mask-wearing can be an effective tool in reducing the spread of COVID-19 [9], [14], [17], [24]–[28]. One study published in the *Lancet* found that universal masking in the community can reduce the risk of infection by 85%. Another study published in *Health Affairs* found that mask-wearing can reduce the risk of COVID-19 transmission by up to 85% when used in combination with other measures such as physical distancing and hand hygiene.

A study published in the *Journal of Hospital Infection* found that mask-wearing can be effective in reducing the spread of COVID-19 in healthcare settings, particularly in areas where the virus is circulating at high levels. Other studies have also demonstrated that mask-wearing can be effective in reducing the spread of other respiratory viruses, such as influenza. It is important to note that these studies have their own limitations and should be considered in context with the current scenario, and the use of masks should be guided by public health authorities and should be based on the best available scientific evidence.

The results and findings of the data that will be obtained throughout the questionnaire will analyzed by using SPSS software and compared with literature review data for better discussion and delivering of the idea. Additionally, the various respondent's characteristics is an essential for the effectiveness of the study to ensure the study investigation had established based on different suggestion and opinions.

By conducting this study, it is hopefully expected to establish and cover its main objectives that concentrate on investigate people acceptance level of mandated masks wearing as an effective public policy to prevent COVID-19 from spreading, identifying the regulations and standards of manufacturing of non-medical masks with regarding of an important parameters of better performance, and guide people to effectively manage their use of masks especially at public areas. By obtaining that, the following results are expected to be achieved:

By investigation the level of public acceptance of mandating masks wear COVID- 19 cases is expected to be reduced.

By determination the standards and regulations of masks manufacturing a non- medical masks will be produced with better efficiency that will prevent the virus to be spread.

By developing a conceptual framework of masks usage guides, individuals will get the ability of masks using management to combat COVID-19 pandemic.

5. Recommendation

The advice for the public during and after the COVID-19 pandemic will likely evolve as the situation changes and more information becomes available. However, some general recommendations that have been made by public health authorities include:

a. During the pandemic:

Wear a mask in situations where physical distancing is difficult to maintain, such as in crowded indoor spaces, on public transportation, and in areas with high transmission rates.

Practice physical distancing by staying at least 6 feet away from others.

Wash your hands frequently with soap and water for at least 20 seconds or use an alcohol-based hand sanitizer.

Avoid touching your face, especially your eyes, nose, and mouth.

Stay home if you are feeling sick or have been in close contact with someone who has tested positive for COVID-19.

Get tested and quarantine if you have been exposed to someone who has tested positive for COVID-19.

Follow the guidelines and recommendations provided by public health authorities.

b. After the pandemic:

Get vaccinated if you are eligible and have not done it yet.

Continue to practice good hygiene, such as washing your hands frequently and avoiding touching your face.

Follow the guidelines and recommendations provided by public health authorities regarding mask-wearing, physical distancing, and other measures.

Stay informed and aware of the current situation and any changes to guidelines and recommendations.

Stay home if you are feeling sick or have been in close contact with someone who has tested positive for COVID-19.

It is important to note that the guidelines and recommendations will continue to be updated as more information becomes available, and the situation evolves. It is important to stay informed and follow the advice provided by public health authorities to protect yourself and others.

6. Conclusion

Mandatory mask wear has been shown to be an effective public health policy in reducing the spread of COVID-19. Studies have demonstrated that mask-wearing can help to control the transmission of the virus, particularly in indoor settings where the risk of transmission is higher. Additionally, mandatory mask wear can also be an effective way to reduce the spread of COVID-19 in areas with high transmission rates. However, it is important to note that mandatory mask wear should be implemented in conjunction with other public health measures such as physical distancing, hand hygiene, and testing and contact tracing.

After the COVID-19 pandemic, it is still recommended that people continue to wear masks in certain situations to reduce the risk of transmission. This includes in crowded indoor settings, on public transportation, and in areas with high transmission rates. Masks can also be used as a precautionary measure to protect people who are at a higher risk of severe illness from COVID-19, such as older adults or those with underlying health conditions. However, as more and more people get vaccinated and the number of infections decreases, the guidelines for mask wear are expected to relax. Public health officials will continue to monitor the situation and adjust recommendations as needed to protect public health. It is important to note that, even after the pandemic, the use of masks should be guided by public health authorities and should be based on the best available scientific evidence.

References

- [1] O. Altuntaş and Y. Tekeci, "Effect of COVID 19 on perceived stress, coping skills, self-control and self-management skills," 2020.
- [2] Z. Wu and J. M. McGoogan, "Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention," *jama*, vol. 323, no. 13, pp. 1239–1242, 2020.

- [3] M. Lipsitch, D. L. Swerdlow, and L. Finelli, “Defining the epidemiology of Covid-19—studies needed,” *N. Engl. J. Med.*, vol. 382, no. 13, pp. 1194–1196, 2020.
- [4] N. U. CEPAL, “The effects of the coronavirus disease (COVID-19) pandemic on international trade and logistics,” 2020.
- [5] S. M. Moghadas *et al.*, “The implications of silent transmission for the control of COVID-19 outbreaks,” *Proc. Natl. Acad. Sci.*, vol. 117, no. 30, pp. 17513–17515, 2020.
- [6] L. Labban, N. Thallaj, and A. Labban, “Assessing the level of awareness and knowledge of COVID 19 pandemic among syrians,” *Arch. Med.*, vol. 12, no. 3, p. 0, 2020.
- [7] WHO, “WHO coronavirus disease (COVID-19) dashboard,” *World Health Organization*, 2021. [Online]. Available: <https://covid19.who.int/>. [Accessed: 20-May-2021].
- [8] V. M. Cvetković, N. Nikolić, U. Radovanović Nenadić, A. Öcal, E. K. Noji, and M. Zečević, “Preparedness and preventive behaviors for a pandemic disaster caused by COVID-19 in Serbia,” *Int. J. Environ. Res. Public Health*, vol. 17, no. 11, p. 4124, 2020.
- [9] F. Di Gennaro *et al.*, “Coronavirus diseases (COVID-19) current status and future perspectives: a narrative review,” *Int. J. Environ. Res. Public Health*, vol. 17, no. 8, p. 2690, 2020.
- [10] J. Howard *et al.*, “Face masks against COVID-19: an evidence review,” 2020.
- [11] S. Jooss, A. McDonnell, and K. Conroy, “Flexible global working arrangements: An integrative review and future research agenda,” *Hum. Resour. Manag. Rev.*, no. February, p. 100780, 2020.
- [12] C. J. Worby and H.-H. Chang, “Face mask use in the general population and optimal resource allocation during the COVID-19 pandemic,” *Nat. Commun.*, vol. 11, no. 1, pp. 1–9, 2020.
- [13] M. Mills, C. Rahal, and E. Akimova, “Face masks and coverings for the general public: behavioural knowledge, effectiveness of cloth coverings and public messaging,” *R. Soc.*, vol. 26, 2020.
- [14] C. Matuschek *et al.*, “Face masks: benefits and risks during the COVID-19 crisis,” *Eur. J. Med. Res.*, vol. 25, no. 1, pp. 1–8, 2020.
- [15] S. Rab, M. Javaid, A. Haleem, and R. Vaishya, “Face masks are new normal after COVID-19 pandemic,” *Diabetes Metab. Syndr. Clin. Res. Rev.*, vol. 14, no. 6, pp. 1617–1619, 2020.
- [16] C. Betsch *et al.*, “Social and behavioral consequences of mask policies during the COVID-19 pandemic,” *Proc. Natl. Acad. Sci.*, vol. 117, no. 36, pp. 21851–21853, 2020.
- [17] T. Greenhalgh, M. B. Schmid, T. Czypionka, D. Bassler, and L. Gruer, “Face masks for the public during the covid-19 crisis,” *Bmj*, vol. 369, 2020.
- [18] H. Brüßow and S. Zuber, “Can a combination of vaccination and face mask wearing contain the COVID-19 pandemic?,” *Microb. Biotechnol.*, vol. 15, no. 3, pp. 721–737, 2022.
- [19] S. S. Ray, H. K. Lee, D. T. T. Huyen, S.-S. Chen, and Y.-N. Kwon, “Microplastics waste in environment: A perspective on recycling issues from PPE kits and face masks during the COVID-19 pandemic,” *Environ. Technol. Innov.*, p. 102290, 2022.
- [20] H. Du, S. Huang, and J. Wang, “Environmental risks of polymer materials from disposable face masks linked to the COVID-19 pandemic,” *Sci. Total Environ.*, p. 152980, 2022.
- [21] D. H. R. Spennemann, “COVID-19 face masks as a long-term source of microplastics in recycled urban green waste,” *Sustainability*, vol. 14, no. 1, p. 207, 2022.
- [22] E. B. Tirkolaei, A. Goli, P. Ghasemi, and F. Goodarzi, “Designing a sustainable closed-loop supply chain network of face masks during the COVID-19 pandemic: Pareto-based algorithms,” *J. Clean. Prod.*, vol. 333, p. 130056, 2022.

- [23] M. H. Haischer *et al.*, “Who is wearing a mask? Gender-, age-, and location-related differences during the COVID-19 pandemic,” *PLoS One*, vol. 15, no. 10, p. e0240785, 2020.
- [24] K. K. Cheng, T. H. Lam, and C. C. Leung, “Wearing face masks in the community during the COVID-19 pandemic: altruism and solidarity,” *Lancet*, vol. 399, no. 10336, pp. e39–e40, 2022.
- [25] M. Liao *et al.*, “A technical review of face mask wearing in preventing respiratory COVID-19 transmission,” *Curr. Opin. Colloid Interface Sci.*, vol. 52, p. 101417, 2021.
- [26] H. K. Duan, H. Hu, M. Vasarhelyi, F. S. Rosa, and M. V. L. Lyrio, “Open Government Data (OGD) driven decision aid: a predictive model to monitor COVID-19 and support decisions in a Brazilian State,” 2020.
- [27] W. McKibbin and R. Fernando, “The global macroeconomic impacts of COVID-19: Seven scenarios,” *Asian Econ. Pap.*, vol. 20, no. 2, pp. 1–30, 2021.
- [28] E. E. Team, “Latest updates on COVID-19 from the European Centre for Disease Prevention and Control,” *Eurosurveillance*, vol. 25, no. 6, p. 2002131, 2020.