

p-ISSN : 2788-4961 | e-ISSN : 2788-418X

DOI(Journal): 10.31703/giddr

DOI(Volume): 10.31703/giidr/.2024(IX)

DOI(Issue): 10.31703/giidr.2024(IX.II)



www.giidrjournal.com

GIIDR
Global Immunological &
Infectious Diseases Review

GIIDR

GLOBAL IMMUNOLOGICAL &
INFECTIOUS DISEASES REVIEW

HEC-RECOGNIZED CATEGORY-Y

VOL. IX, ISSUE II, SPRING (JUNE-2024)



Double-blind Peer-review Research Journal

www.giidrjournal.com

© Global Immunological & Infectious Diseases Review

Article Title

The Impact of Microsmart Lockdown (MSLD) Strategy on Flattening the Covid-19 Curve in Pakistan

Global Immunological & Infectious Diseases Review

p-ISSN: 2788-4961 e-ISSN: 2788-418X

DOI(journal): 10.31703/giidr

Volume: IX (2024)

DOI (volume): 10.31703/giidr.2024(IX)

Issue: Spring (June-2024)

DOI(Issue): 10.31703/giidr.2024(IX-II)

Home Page

www.giidrjournal.com

Volume: IX (2024)

<https://www.giidrjournal.com/Current-issues>

Issue: II-Spring (June-2024)

<https://www.giidrjournal.com/Current-issues/9/2/2024>

Scope

<https://www.giidrjournal.com/about-us/scope>

Submission

<https://humaglobe.com/index.php/giidr/submissions>

Google Scholar



Visit Us



Abstract

A new coronavirus that emerged in late December 2019 in Wuhan, China has now spread to almost every country on Earth. At the end of February, Pakistan reported its first case. Three weeks after the initial incident, with a total of more than 880 cases, the nation went into lockdown. While a month-long shutdown in Pakistan successfully contained the COVID-19 pandemic, the government gradually lifted the restrictions in late April to ease economic pressures. Using data collected from the National Institute of Health Pakistan's daily status reports, this research examines the consequences of both harsh lockdowns and smart lockdowns in detail. According to our data, the number of instances increased before to the lockdown but decreased after it began. It demonstrated that the lockdown was successful.

Keywords: COVID-19, Micro Smart Lockdown, World Health Organization, Severe Acute Respiratory Syndrome

Authors:

Sadiq Ali: (Correspondent author)

MS Scholar, Department of Management Sciences, Brains Institute, Peshawar, KP, Pakistan.

(Email: dr.sadiqali50@gmail.com)

Natasha: MS Scholar, Department of Management Sciences, Brains Institute Peshawar, KP, Pakistan.

Syed Asim Shah: Assistant Professor, Department of Management Sciences, COMSATS Islamabad, Pakistan.

Pages: 31-39

DOI: 10.31703/giidr.2024(IX-II).05

DOI link: [https://dx.doi.org/10.31703/giidr.2024\(IX-II\).05](https://dx.doi.org/10.31703/giidr.2024(IX-II).05)

Article link: <http://www.giidrjournal.com/article/A-b-c>

Full-text Link: <https://giidrjournal.com/fulltext/>

Pdf link: <https://www.giidrjournal.com/jadmin/Auther/31rvl0A2.pdf>

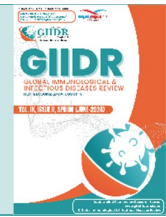


This work is licensed under the Attribution-NonCommercial- No Derivatives 4.0 International.

Citing this Article

05	The Impact of Microsmart Lockdown (MSLD) Strategy on Flattening the Covid-19 Curve in Pakistan						
	Author	Sadiq Ali Natasha Syed Asim Shah		DOI	10.31703/giidr.2024(IX-II).05		
Pages	31-39	Year	2024	Volume	IX	Issue	II
Referencing & Citing Styles	APA	Ali, S., Natasha, & Shah, S. A. (2024). The Impact of Microsmart Lockdown (MSLD) Strategy on Flattening the Covid-19 Curve in Pakistan. <i>Global Immunological & Infectious Diseases Review</i> , IX(II), 31-39. https://doi.org/10.31703/giidr.2024(IX-II).05					
	CHICAGO	Ali, Sadiq, Natasha, and Syed Asim Shah. 2024. "The Impact of Microsmart Lockdown (MSLD) Strategy on Flattening the Covid-19 Curve in Pakistan." <i>Global Immunological & Infectious Diseases Review</i> IX (II):31-39. doi: 10.31703/giidr.2024(IX-II).05.					
	HARVARD	ALI, S., NATASHA & SHAH, S. A. 2024. The Impact of Microsmart Lockdown (MSLD) Strategy on Flattening the Covid-19 Curve in Pakistan. <i>Global Immunological & Infectious Diseases Review</i> IX, 31-39.					
	MHRA	Ali, Sadiq, Natasha, and Syed Asim Shah. 2024. 'The Impact of Microsmart Lockdown (MSLD) Strategy on Flattening the Covid-19 Curve in Pakistan', <i>Global Immunological & Infectious Diseases Review</i> , IX: 31-39.					
	MLA	Ali, Sadiq, Natasha, and Syed Asim Shah. "The Impact of Microsmart Lockdown (MslD) Strategy on Flattening the Covid-19 Curve in Pakistan." <i>Global Immunological & Infectious Diseases Review</i> IX.II (2024): 31-39. Print.					
	OXFORD	Ali, Sadiq, Natasha, and Shah, Syed Asim (2024), 'The Impact of Microsmart Lockdown (MSLD) Strategy on Flattening the Covid-19 Curve in Pakistan', <i>Global Immunological & Infectious Diseases Review</i> IX (II), 31-39.					
TURABIAN	Ali, Sadiq, Natasha, and Syed Asim Shah. "The Impact of Microsmart Lockdown (MslD) Strategy on Flattening the Covid-19 Curve in Pakistan." <i>Global Immunological & Infectious Diseases Review</i> IX, no. II (2024): 31-39. https://dx.doi.org/10.31703/giidr.2024(IX-II).05 .						





Cite Us



Title

The Impact of Microsmart Lockdown (MSLD) Strategy on Flattening the Covid-19 Curve in Pakistan

Abstract

A new coronavirus that emerged in late December 2019 in Wuhan, China has now spread to almost every country on Earth. At the end of February, Pakistan reported its first case. Three weeks after the initial incident, with a total of more than 880 cases, the nation went into lockdown. While a month-long shutdown in Pakistan successfully contained the COVID-19 pandemic, the government gradually lifted the restrictions in late April to ease economic pressures. Using data collected from the National Institute of Health Pakistan's daily status reports, this research examines the consequences of both harsh lockdowns and smart lockdowns in detail. According to our data, the number of instances increased before to the lockdown but decreased after it began. It demonstrated that the lockdown was successful.

Keywords: [COVID-19](#), [Micro Smart Lockdown](#), [World Health Organization](#), [Severe Acute Respiratory Syndrome](#)

Authors:

Sadiq Ali: (Corresponding author)

MS Scholar, Department of Management Sciences, Brains Institute, Peshawar, KP, Pakistan.

(Email: dr.sadiqali50@gmail.com)

Natasha: MS Scholar, Department of Management Sciences, Brains Institute Peshawar, KP, Pakistan.

Syed Asim Shah: Assistant Professor, Department of Management Sciences, COMSATS Islamabad, Pakistan.

Contents

- [Introduction](#)
- [Research Questions](#)
- [Literature Review](#)
- [Covid-19 Pandemic](#)
- [Moving Ahead](#)
- [Councils and local governments are responsible](#)
- [The COVID-19 Answer from UNESCO](#)
- [The Effects of COVID-19 on Mental Health](#)
- [Terms Explained](#)
- [Rules for Carrying Out the Plan](#)
- [Methodology](#)
- [Results and Discussion](#)
- [Conclusion and Recommendations](#)
- [Conclusion & Recommendations](#)
- [Limitations and Future Directions](#)
- [References](#)

Introduction

COVID-19, formerly known as the 2019 novel coronavirus (2019-ncov), is a SARS-Cov-2 virus that causes severe acute respiratory syndrome. This coronavirus illness follows SARS-cov in 2002–2003 and MERS-cov in 2012 as the third instance of its kind. Although SARS-cov-2 has a lower rate of propagation, both SARS and MERS have a higher death rate. There were 80,098 cases of SARS globally at the conclusion of

the 2003 pandemic, with 774 deaths (a mortality rate of 9.6%) (Lau et al., [2020](#)). There have been 2494 confirmed cases of MERS as of November 2019, with 858 fatalities, with a mortality rate of 34.4% (Roques et al., [2020](#)). Meanwhile, as of May 4, 2020, there have been 3,435,894 confirmed cases of COVID-19, with 239,604 fatalities (a mortality rate of 6.9%) globally, according to the WHO status report (Lancet, [2020](#)).



Several individuals brought to hospitals in late December 2019 with an initial diagnosis of pneumonia of uncertain etiology in Wuhan, Hubei province, China, were the first to get COVID-19. Epidemiological evidence connected these cases to Wuhan's wholesale market for seafood and wet animals (Mattern et al., 2020; Neidhöfer & Neidhöfer, 2020). An estimated 571 cases of COVID-19 have been detected throughout 25 provinces in China as of January 22, 2020 (Mattern et al., 2020). The virus has spread to 18 countries outside of China, with a total of 7818 cases globally (Amer et al., 2020; Leng et al., 2021). On January 30, 2020, the World Health Organisation recognized it as a Public Health Emergency of International Concern (PHEIC). When the sickness reached 114 cases on March 11, 2020.

Because a COVID-19 vaccine is not yet available, stopping the transmission of the virus and keeping it contained are the only options for dealing with this epidemic. In order to control the spread of this epidemic, almost a hundred nations had to implement some kind of lockdown (Sanchez et al., 2020).

This research aims to provide insight into how the COVID-19 shutdown in Pakistan affected the transmission of the virus. Instead of imposing a nationwide lockdown all at once, the administration eased into it. There have been three distinct approaches to statistical analysis of COVID-19 data, based on the measures used by the government and the duration of the lockdown. Lastly, the effect of each group on the disease's progression in Pakistan has been investigated.

Problem statement

When it comes to preventing epidemics and pandemics, quarantine is one historical preventive technique that plays a crucial role. Simplified, it's the practice of keeping a patient under suspicion alone for a certain amount of time (Cakir & Savas, 2020). A person is moved to a hospital for further treatment if they acquire signs of a certain illness while they are isolated. They are allowed to go if they don't experience any of those symptoms. Each illness has its own specific quarantine time. A 14-day incubation time was proposed as a quarantine period for the coronavirus.

While the first phase of Pakistan's lockdown was very successful, the negative effects on the labor community meant that it could not be maintained indefinitely. Phase two saw an easing of the lockdown restrictions to a partial state. Several fatalities and recoveries were recorded in the COVID-19 pandemic.

Hence, the lockdown was loosened in preparation for a smart lockdown. Businesses and stores that had previously closed were reopened during this time in the hopes of hiring daily wage workers. Although the decision was well-received, there has been a significant spike in COVID-19 cases, fatalities, and recoveries. The data showed that the highest infection rate was among those aged 20–34, whereas the highest mortality rate was among the elderly. This was not a viable choice since the labor community was the hardest hit by the forced lockdown. Workers were provided monetary aid of Rs. 12,000/-so that the smart lockdown could be maintained effectively. We can't claim that the smart lockdown and financial aid were successful in preventing the spread of COVID-19, but they did help. It was advised to maintain the smart lockdown in place and use force-lockdown measures in high-risk regions. Additionally, set up and oversee environments for infectious individuals to be isolated and quarantined.

Research Questions

1. Does micro Smart Lockdown significantly affect the COVID-19 Curve?
2. Does the financial micro Smart Lockdown strategy significantly affect the COVID-19 Curve?
3. Does micro Smart Lockdown implementation significantly affect the COVID-19 Curve?

Research objectives

1. To examine the effect of micro Smart Lockdown on the COVID-19 Curve?
2. To investigate the effect of micro Smart Lockdown on the COVID-19 Curve?
3. To evaluate the effect of micro Smart Lockdown on the COVID-19 Curve?

Literature Review

Covid-19 Pandemic

The COVID-19 pandemic is an issue on a global scale. It is a serious task for the whole world to save mankind since vaccination is not yet available. Lockdowns self-quarantine, and isolation of COVID-19 patients are the only preventative measures that have been used so far (Amer et al., 2020). Coronavirus is a very infectious disease that may affect people of any age. Sanitation, avoiding crowded areas, and the notion of social distance are some of the preventative methods that researchers are trying to uncover in an effort to reduce the number of COVID-19 cases and accompanying mortality (Leng et al., 2021). The recommended

minimum duration of lockdown was 14 days due to the 14-day incubation period of the coronavirus. The adversary will perish from its own wounds in this manner. The number of casualties was kept to a minimum since several nations went into lockdown. At this time, no nation has completely eradicated the COVID-19 pandemic. Virus activity is ongoing, and its consequences are spreading rapidly. Consequently, the number of preventative actions must be increased.

Over the last four months, Pakistan has been battling the COVID-19 pandemic with its limited resources (Abdulmir & Hafidh, 2020). To fine-tune its efforts for the long-term struggle, it must first determine which age group(s) are most at risk so that it can take measures to protect them. China, Italy, and Iran's stories may provide light on the matter (Zheng et al., 2020). Without the right data, we can't say for sure how much longer developing nations like Pakistan can battle the COVID-19 pandemic with what little they have. The current COVID-19 mortality rate in Pakistan is quite low, that much is certain. We need to find a strategy to limit the spread of COVID-19 or at least reduce the risks connected with it (Kusunoki & Hayashi, 2008).

Now, more than ever before, the whole world is in danger from the coronavirus. As a result, we need to have both technical and non-technical conversations around COVID-19 in order to figure out how to safeguard people. This page makes an effort to compare the mortality toll during the different stages of the COVID-19 shutdown with those of other nations.

Influences of Pakistan's Sociocultural and Economic Factors on the Spread of the COVID-19 Virus

Some of the factors that play a big role in epidemics include differences in socioeconomic status, religion and cultural practices, innocent actions, and casual attitudes. In light of the ever-increasing number of COVID-19 cases, we address the many social, economic, cultural, and religious factors that contribute to the virus's spread. The healthcare system in Pakistan is clearly inadequate and unprepared to deal with the COVID-19 pandemic because of a lack of funding and poor management. However, other factors such as social norms, religious beliefs, public opinion, and practices also play a role in the current outbreak and should be taken into account when formulating policy responses.

Religious practices coexist with poor social and human indicators like poverty, overpopulation, and low

literacy rates because of the country's demographic and geographical vastness as well as its stratification of social and cultural status. Events of terrorism, inadequate water supply, unclean living conditions, and disregard for legal requirements.

Reasons for this include differences in response from states and the federal government, as well as the length of time it took to impose a countrywide lockdown. Pakistan has banned intercity public transit in an effort to reduce the number of social issues caused by this. In the same vein, as of March 21, 2020, all foreign aircraft were temporarily grounded and the western borders were sealed. There was a lockdown of schools and businesses.

The mental health toll of fighting this epidemic, which involves self-and state-imposed seclusion, is high and might cause another catastrophe. People all throughout the world have different cultures, but one thing they have in common is a need to connect with others. The inhabitants of the subcontinent, where mixed families are prevalent, are particularly affected by this. They lose that connection due to their isolation.

Moving Ahead

With all of this in mind, it becomes clear how important it is to counteract pseudo-scientific practices and spread accurate knowledge. When it comes to the coronavirus epidemic in Pakistan, people are devouring health-related information, but it won't be enough to manage the virus. For public health programs to be effective, significant changes in behavior are required. As the epidemic rumbles on, it is of the utmost significance to determine how much progress can be made in such a short time.

Clearly, withdrawing from others and putting distance between oneself and others are not just platitudes that everyone should and can follow. It has encouraging results. The significance of these actions should be recognized and appreciated by everybody. But we can't turn a blind eye to the consequences it will have on regular people. The responsibility for comprehending and meeting the demands of the people under their control lies with the governments. This component must be comprehended, and the public must be informed of the rationale for each stage. However, more people may die from 19-CoV infections if the economy remains in a slump for an extended period of time, due to factors such as "deaths of desperation" and pressures on public health expenditures. Government action on a national scale, if

taken quickly, has the potential to reduce the rate of spread of this pandemic.

The Intercultural Dialogue Report by UNESCO

Enhancing peace-building and sustainable development within and between communities may be achieved via intercultural discourse, a crucial deliberative tool. With the COVID-19 pandemic and its focus on physical isolation and inactivity, ICD, in both its organized and unstructured forms, has mostly moved online. This change has made it easier to have and keep going talks that are much needed across different socioeconomic, ethnic, religious, and cultural boundaries. As the examples below show, governments, civil society activists, and health practitioners need to act urgently to address new forms of discrimination that the pandemic has brought to light, increasing the urgency of the need for dialogue during COVID-19.

Councils and local Governments are Responsible

Already highlighted is the fact that the COVID-19 epidemic makes social and economic disparities worse. It highlights the need for community groups to rise up against these realities and discover alternative ways to stand together. In response to various types of social vulnerability, several regional and municipal governments have sought to provide direct assistance to communities in accordance with their unique local requirements. Many of these programs have focused on three main areas: (i) helping people in a more tangible way, including via housing and microfinance; (ii) creating opportunities for people of all ages to get together and have fun, and (iii) assisting immigrants and foreign workers.

The COVID-19 Answer from UNESCO

There has been a strong resonance between the COVID-19 epidemic and UNESCO's mandate and basic purpose. Activities to encourage solidarity and cultural exchange, as well as to help marginalized communities become more integrated, are part of UNESCO's reaction to the COVID-19 pandemic. These are the cornerstones of a plan to bring the world's population closer together and strengthen the ties that bind us as human beings. Here are a few instances of such replies to help illustrate the point.

Amidst this unprecedented educational upheaval, a Global Education Coalition was established to address

school closures and support online learning as a means to ensure that education continues for everyone. To lessen the impact of COVID-19 right now and pave the way for future, more adaptable educational institutions, the effort is trying to get people to put money into online education. Cultural diversity, artists' and creative workers' social rights, and the ability to access culture are all impacted by the political, economic, and social ramifications of COVID-19.

During and after COVID-19, Important Guidelines for Promoting ICD and Social Cohesiveness

First, COVID-19 has shown that there are pros and cons to our global community's interconnection and dependency. Building sustained readiness of all societies for economic crises, global wars, natural catastrophes, and pandemics requires engagement and collaboration across cultures, communities, and sectors, as was one of the major lessons from the pandemic. Recognizing the importance of interdependence and connectivity in constructing cross-sectoral, complementary capacities in the fields of health, education, economics, culture, and science is crucial to this collective, worldwide capacity-building endeavor.

Second, expanding upon the new kinds of unity that have surfaced in response to the COVID-19 epidemic should be a top priority. This will perhaps help us better handle future global crises such as climate change, economic downturns, social injustices, and digital divides throughout the world. Thirdly, in the world after COVID-19, a new social compact must be established on the principles of universal human rights, inclusive development, and respect for variety. This calls for a paradigm shift in how we interact with one another on a personal, communal, and international level. Distancing oneself physically does not always mean one is socially isolated, but social distancing always implies one is separated.

The Effects of COVID-19 on Mental Health

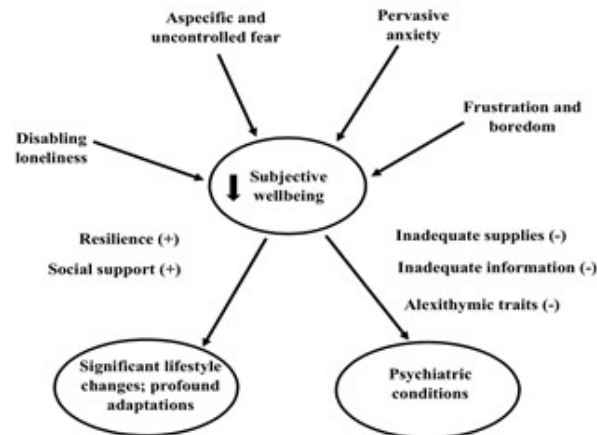
The 2019 coronavirus illness (COVID-19) pandemic, which began in the Chinese city of Wuhan and was caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), swiftly produced a global socio-economic disaster and deep psychological misery. Stress, worry, despair, frustration, and uncertainty were among the many mental health issues that surfaced during the COVID-19 pandemic. Our goal in doing this research was to go through all the published accounts of how COVID-19 affects people's mental

health. Along with the most pertinent psychological responses in the general public relative to the COVID-19 pandemic, the psychological effects of quarantine have also been recorded. There has also been

discussion on the importance of risk and protective variables in determining whether susceptible people would acquire mental problems.

Figure 1

Psychological Impact



Procedures for smart lockdown in administration:

Terms Explained

A hotspot is defined as a region where data analytics, epidemiologic studies, or field evaluations have shown an increased incidence or transmission of a disease, often more than 1.5 cases per 1000.

Geographically Based Hotspot disease hotspot is a concentrated population of sick people in a certain urban, suburban, rural, or rural location.

Temporal Hotspots Potentially Dangerous Work Environments. During business hours, a large number of IPs and PIPs visit a business center, marketplace, retail mall, etc.

Smart Lockdown's Function

With the goal of limiting or slowing the local spread of COVID-19 and breaking the transmission cycle of the illness, smart lockdowns restrict the maximum number of IPs to an identified hotspot. Enhanced epidemiological measures such as case testing, case tracking, quarantine, and isolation in a proven or suspected hotspot would also be required. The present setting elevates the need for smart lockdowns because:

We are now at a crucial period of the disease's progression, and our proactive measures are the only

way to significantly slow down the spread in the following weeks.

City-wide lockdowns, although practical from an administrative standpoint, are not feasible due to their unsustainable economic and social impacts.

Because there is known to be variation in illness prevalence across different parts of a city, a differentiated strategy is feasible. Therefore, smart lockdowns provide a balanced way to control the spread in this situation

Rules for Carrying Out the Plan

Typically, when a district identifies certain areas to be under lockdown, such areas should strive to include a significant part of the district's total IPs.

For administrative simplicity and practicality, vast regions should be targeted instead of tiny blocks or street-based lockdowns. In order to maximize profits and make administrative and logistical tasks easier, densely populated areas may be chosen when setting priorities. The Epidemic Disease Control Act of 1958 or any other provincial regulations may provide the authority to the local government to enforce mandatory compliance for the residents.

The local health authorities in the region where the outbreak is most concentrated need to increase testing, patient tracking, quarantine, and effective home

isolation measures. The epi-curve and daily updates from the hotspot will be used to track the disease's progress.

In order to provide inhabitants, owners of critical establishments, and other service providers enough time to prepare, a 24 to 48-hour notice is required before any lockdown, after the appropriate communication. The amount of notice needed depends on the local demographics and administrative/logistical concerns. The previous message has to have a lot of publicity and contain "Dos" and "don'ts" for the impacted population to follow during the lockdown in terms of enhanced alertness, infection prevention, and control. The administrative assistance and incentives that are being offered to the community Details on the emergency hotlines. Their rights, including protection from disciplinary action by their respective offices or employers, among other things.

The length of the lockdown, which may be adjusted if needed, should be at least two weeks and should be based on scientific data. Make sure that people can't easily enter or leave the hotspot, and that they can't move freely inside it either. The lockdown region is to be completely off-limits to all businesses, with the exception of pharmacies, food shops, and emergency/essential services, among others.

Complete mobility restrictions for the elderly and the ill should be enforced whenever feasible. Additionally, with appropriate health measures, only one young person per family should be permitted to purchase food and medical supplies. It is crucial to include community members and volunteers, such as Imam Masjids and local elders, in order to improve service delivery and logistics, keep an eye on the health of each neighborhood, and lend a hand to district administrations and law enforcement agencies with overall implementation. The execution of standard operating procedures (SOPs) at essential shops operating inside the hotspot must be closely monitored. Milkmen, newspaper deliverymen, and anybody else who brings newspapers or other items to people's homes should be closely monitored by the local government.

Residents should be well informed of the emergency services' helplines and phone numbers in the event of a medical evacuation. The mosque's standard operating procedures (SOPs) will not apply in restricted areas; only the resident staff members of the mosque, taking all necessary safeguards, will be allowed to attend jamaat. Everyone else has to stay home and pray. Over the lockdown time, outpatient departments

at local hospitals should not offer any services; nevertheless, emergency services will be available. The hotspot notice needs to include instructions for businesses and other employers to abstain from taking any disciplinary measures against workers who are unable to show up because of the lockdown restrictions.

Everyone involved may also be informed of any additional local instructions or rules that the district administration deems important, taking into account the current circumstances on the ground.

Methodology

The data for the research study was downloaded from the official site of the Bureau of Statistics. COVID-19-related data from Pakistan were acquired from the websites of (the World Health Organization, [2020](#)) and the Health Department of Pakistan. For the sake of this study, the lockdown was divided into three different phases

1. Phase I; The forced lockdown period: 15th March to 30th March, 2020
2. Phase II: Partial Lockdown period: 31st March to 5th April, 2020
3. Phase III: Smart and Microsmart Lockdown period; 6th April to 15th April 2020 (pre-, during, and Post).

Results and Discussion

This section is all about the analysis of the data which was gathered through statistical techniques. The first incidence of COVID-19 in Pakistan was reported on February 25, 2020. As of March 31st, the COVID-19 death toll has risen to 25 (Ksiazek et al., [2003](#)). According to the World Health Organisation, there has been an uptick in the number of reported cases. The number of COVID-19 instances is very low when compared to other nations, particularly neighboring Iran and China. It wasn't until March 29 that the first fatality from COVID-19 was recorded; the first case was reported on February 25. At that time, the coronavirus was widely disregarded. It is evident that Pakistan's predicament is not the worst when compared to its neighboring nations, China and Iran.

Following standard operating procedure (SOP) for workplace cleanliness, usage of hand sanitizers and masks, and maintenance of social distancing, all re-opened firms were instructed to do the same. Efforts to limit the number of instances and flatten the curve were borne by this approach, which also supported economic and commercial operations.

Figure 2

Case Progression before the Smart Lockdown

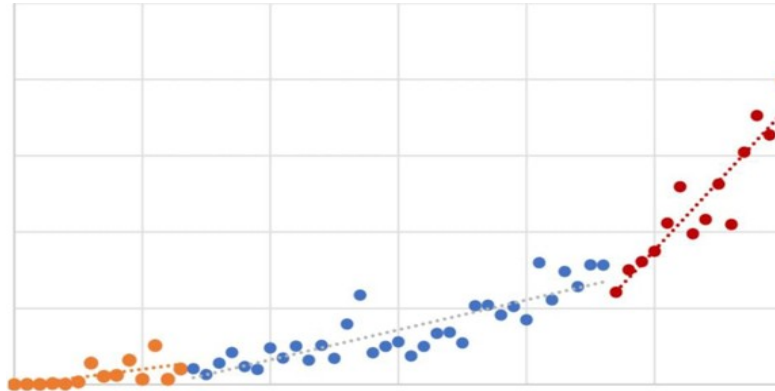
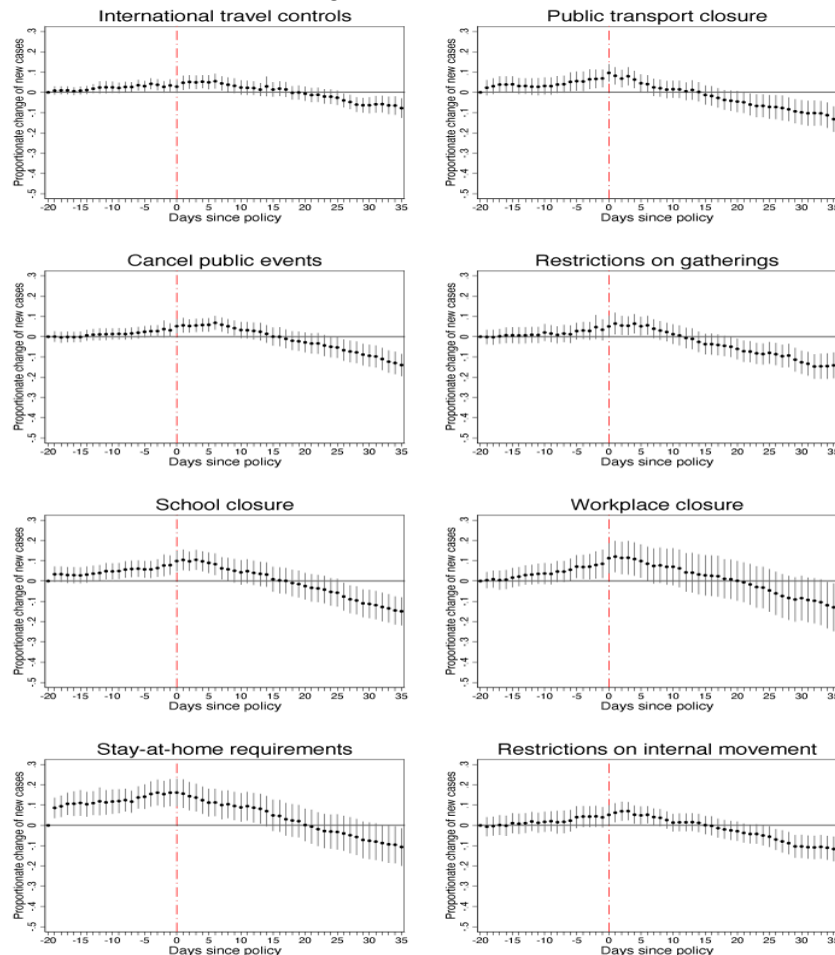


Figure 3

Flattening of Curve after the Smart Lockdown Strategies



Note: Data from Hale et al. (2020), European CDC and own calculations

The government of Pakistan has established quarantine houses in different towns and along the country's

borders. At the same time, the administration has opted to isolate large cities for more than a month.

Following the lead of other nations like China and Malawi, the whole country went into self-quarantine in this manner (WHO, 2020). However, no government facility has been given to keep the citizens inside. They were permitted to leave their homes in order to get necessities and necessities of life, including food and medication. In this way, some stores were permitted to remain open. These consist of grocery shops, drugstores, and health food stores, among others. Hotels, wedding halls, barbershops, and beauty parlors were among the businesses and stores that were entirely shuttered.

Conclusion and Recommendations

This chapter presents the findings of the research and makes some suggestions based on those findings. The aims of the research as well as the findings are broken down in further detail in the conclusion section. In addition, recommendations are all about the proposals that are brought forward for the improvement of the stakeholders of the study, and they are presented in this paragraph.

Conclusion & Recommendations

The recommendations are the most important part of a research project. In this section, we present the proposals that the study brought up for the improvement of all parties involved, including society, industry, and the government. The suggestions that follow serve as a set of policy guidelines for the government and those who are now in charge of the affairs of the world. People of all ages are at risk from the rapidly expanding COVID-19 pandemic. Quarantine was proposed as a potential preventative approach in the absence of a vaccination or treatment facility. Q&A sessions have been around for a while. Technically speaking, however, it's not easy to quarantine or self-quarantine a whole nation for an extended period of time. With the help of financial aid for the impoverished, Pakistan implemented a smart quarantine.

A steady decline in COVID-19 was seen during the smart lockdown, suggesting it may be a useful tool for prevention. The number of casualties was lowest among those who had worked outside the home in the past. Lockdown procedures need extra attention for elderly and young patients with conditions such as asthma, diabetes, hypertension, and cardiovascular disease. Now, when the testing facility has arrived, it could be recommended to completely lock down a tiny area—one that is particularly susceptible. It is recommended that quarantine facilities be established at the district level and that sick individuals be isolated in hospitals. Helping the whole nation financially did not work. Only those who are vulnerable or infected and living in poverty should get financial aid. As a growing nation, Pakistan will be able to sustain its struggle in this manner.

Limitations and Future Directions

The current research study has several limitations that need to be overcome by future researchers. First and foremost is the smaller sample size of the study which has the lack of generalization effect. Hence future researcher should consider a larger sample size in their upcoming research studies.

Secondly, the sample size of the study is relatively small hence; future researchers should consider a large sample size. Thirdly there are several other variables affecting on COVID-19 Curve which can be independent, moderating, and mediating variables. Hence, future research studies should also take into account other variables while conducting their research studies.

The rapidly expanding pandemic was too much for Pakistan and other poor nations to manage with their meager resources. The efficient response from Pakistan to this epidemic was unexpected. Several new findings pointed to encouraging control over COVID-19. As a result, Pakistan's many initiatives were commendable and successfully stemmed the spread of COVID-19. COVID-19 is or was a novel virus that has an equal impact on developing and developed nations.

References

- Abdulmir, A. S., & Hafidh, R. R. (2020). The Possible Immunological Pathways for the Variable Immunopathogenesis of COVID—19 Infections among Healthy Adults, Elderly and Children. *Electronic Journal of General Medicine*, 17(4), em202. <https://doi.org/10.29333/ejgm/7850>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Amer, F., Hammoud, S., Farran, B., Boncz, I., & Endrei, D. (2020). Assessment of countries' preparedness and lockdown effectiveness in fighting COVID-19. *Disaster Medicine and Public Health Preparedness*, 15(2), e15–e22. <https://doi.org/10.1017/dmp.2020.217>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Cakir, Z., & Savas, H. B. (2020). A mathematical modelling approach in the spread of the novel 2019 coronavirus SARS-COV-2 (COVID-19) pandemic. *Electronic Journal of General Medicine*, 17(4), em205. <https://doi.org/10.29333/ejgm/7861>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Ksiazek, T. G., Erdman, D., Goldsmith, C. S., Zaki, S. R., Peret, T., Emery, S., ... & SARS Working Group. (2003). A Novel Coronavirus Associated with Severe Acute Respiratory Syndrome. *New England Journal of Medicine*, 348(20), 1953–1966. <https://doi.org/10.1056/nejmoa030781>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Kusunoki, Y., & Hayashi, T. (2008). Long-lasting alterations of the immune system by ionizing radiation exposure: implications for disease development among atomic bomb survivors. *International journal of radiation biology*, 84(1), 1–14.
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Lancet, N. (2020). India under COVID-19 lockdown. *The Lancet*, 395(10233), 1315. [https://doi.org/10.1016/s0140-6736\(20\)30938-7](https://doi.org/10.1016/s0140-6736(20)30938-7)
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Lau, H., Khosrawipour, V., Kocbach, P., Mikolajczyk, A., Schubert, J., Bania, J., & Khosrawipour, T. (2020). The positive impact of lockdown in Wuhan on containing the COVID-19 outbreak in China. *Journal of Travel Medicine*, 27(3). <https://doi.org/10.1093/jtm/taaa037>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Leng, T., White, C., Hilton, J., Kucharski, A., Pellis, L., Stage, H., Davies, N. G., Keeling, M. J., & Flasche, S. (2021). The effectiveness of social bubbles as part of a Covid-19 lockdown exit strategy, a modelling study. *Wellcome Open Research*, 5, 213. <https://doi.org/10.12688/wellcomeopenres.16164.2>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Mattern, J., Vauloup-Fellous, C., Zakaria, H., Benachi, A., Carrara, J., Letourneau, A., Bourgeois-Nicolaos, N., De Luca, D., Doucet-Populaire, F., & Vivanti, A. (2020). Post lockdown COVID-19 seroprevalence and circulation at the time of delivery, France. *PLoS ONE*, 15(10), e0240782. <https://doi.org/10.1371/journal.pone.0240782>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Neidhöfer, G., & Neidhöfer, C. (2020). The effectiveness of school closures and other Pre-Lockdown COVID-19 mitigation strategies in Argentina, Italy, and South Korea. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3649953>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Roques, L., Klein, E. K., Papaix, J., Sar, A., & Soubeyrand, S. (2020). Impact of lockdown on the epidemic dynamics of COVID-19 in France. *Frontiers in Medicine*, 7. <https://doi.org/10.3389/fmed.2020.00274>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Sanche, S., Lin, Y. T., Xu, C., Romero-Severson, E., Hengartner, N. W., & Ke, R. (2020). High contagiousness and rapid spread of severe acute respiratory syndrome coronavirus 2. *Emerging Infectious Diseases*, 26(7), 1470–1477. <https://doi.org/10.3201/eid2607.200282>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- World Health Organization. (2020). Coronavirus disease 2019 (COVID-19): Situation report, 73. *World Health Organization*. <https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200402-sitrep-73-covid-19.pdf>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Zheng, Y., Huang, Z., Yin, G., Zhang, X., Ye, W., Hu, Z., Hu, C., Wei, H., Zeng, Y., Chi, Y., Cheng, C., Lin, F., Lu, H., Xiao, L., Song, Y., Wang, C., Yi, Y., & Dong, L. (2020). Comparative study of the lymphocyte change between COVID-19 and non-COVID-19 pneumonia cases suggesting uncontrolled inflammation might not be the main reason of tissue injury. *medRxiv (Cold Spring Harbor Laboratory)*. <https://doi.org/10.1101/2020.02.19.20024885>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)