

# Crowd Psychology and Pandemics; A Brief Study

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**Abstract.** The world is still in the phase of considering and reevaluating different methodologies in order to understand and tackle the current COVID-19 pandemic. Since COVID-19 is a global health crisis, it is vitally important to figure out how to prevent any major disasters and ensure the best outcome. Due to the infectious nature of the virus, the spread and prevention both are direct results of human behavior. This report intends to highlight the importance of learning different forms of crowd psychology and collective behavior, so we can better understand the global and individual response to this strain of the coronavirus. It also takes game theoretic approach to see the impacts of different types of crowd responses and decisions regarding COVID-19. It is also crucial to learn about crowd psychology and how it can help with optimising different ways of spreading awareness. This report is intended to help with making efficient decisions to deal with the current pandemic and its after-effects.

**Keywords:** Crowd psychology · Pandemic · COVID-19/Coronavirus · Collective behaviour

## 1 Introduction

”Crowd behaviour” is a well-known phenomena and it is one that impacts the world tremendously. All great changes that happen in the world, are a result of mass movements to make things better. Oppressed nations achieve independence from ruling tyrants when they united for the cause. Women around the world unite to fight for their rights and to be acknowledged as equals. The world is starting to adapt to diversity, minorities are getting accepted, and all this became possible when people worked together as one, keeping collective benefit as priority. Crowds psychology is often painted in a negative light but it has many positives too. A person in crowd makes decisions not only considering their own profit, but also for the benefit of the crowd they are a part of. We can take the very recent example of the Black Lives Matter movement. Many white Americans joined the movement, despite not being black and having no individual payoff. They did it simply because they have black family members and friends, or because they are citizens of the same country, and hence they are affected by the crowd. In the case of social issues and unpredictable situations,

their end result heavily depends on how people respond. And when a problem concerns the whole society, people have to act as ‘one’ to make decisions that benefit all, or at least the strive toward the outcome with the best payoff. The current COVID-19 pandemic is a massive global health crisis. While there are many aspects of this crisis, one thing is very evident. This is a infectious disease, meaning the virus transfers from people to people, inducing a chain reaction. The virus spread is directly dependent on people’s interaction with people around them. Hence with this paper, we will be looking at COVID-19 in the light of crowd psychology, in hopes to find a fruitful direction for controlling this crisis.

## 2 Background and Scope

### 2.1 How COVID-19 emerged

In December 2019, a virus emerged in Wuhan, China, spreading on a dangerously rapid rate and causing acute respiratory syndrome in humans. According to the COVID-19 dashboard by the Center for Systems Science and Engineering at Johns Hopkins University, the virus has affected over 10 million people around the world costing over 500 thousand lives so far, within a span of just six months. [10]

### 2.2 Our focus

The key preventive measures against COVID-19 are also mostly behavioural – handwashing, social distancing, self-quarantine etc. This makes it very reasonable for us to discuss the pandemic, its impacts and the responses around the world, in terms of crowd psychology.

### 2.3 Method and Scope

In this report we will be discussing different aspects of crowd psychology and collective behaviour. We will be using a game theoretic approach to investigate how collective behaviours hold importance as a response to any crisis, in particular the COVID-19 pandemic, and why exactly is it essential to understand different forms of crowd psychology before making any decisions or conclusions regarding a pandemic of this scale.

We will be looking at existing research papers and expert opinions. We will also try to analyse real-time data and reports of COVID-19 spread, and how the world is responding to the virus on different levels.

## 3 Examples of Applications

The scale of disaster/change is one of the most important triggers to crowd psychology. In his book, *The Crowd*, Gustave Le Bon talks about the impact of scale on a crowd imagination and hence their collective behavior. Hundreds of

small scale crimes or social issues, do not trigger people as a crowd but one big issue or terrorist act can get attention from all around the world. This is relevant to the ongoing COVID-19 pandemic. People outside of China didn't pay much attention at the beginning stages or even when the spread had linear rates in their own region. Even the very existence of the virus was denied, deeming it a propaganda or conspiracy. The panic started when the virus spread reached exponential growth and thousands of people lost their lives, only when it got to that scale did people start treat the virus with the utmost care and attention it needed. [3] (pg. 42)

Written specifically for the current pandemic, the book, *Together Apart: The Psychology of COVID-19*, is an analysis of behavioral psychology and how crowd psychology isn't always negative. This book was written as a collaboration by professors in different fields of psychology (over a distance due to the ongoing pandemic) and it mentions how COVID-19 is different from other disasters as its effects are dispersed around the world, instead of being concentrated on one certain crowd and region. And it examines why different groups are facing different impacts and responding differently. Most importantly, this book is an effort to improve COVID-19 relief efforts and, just like this report, believes that the way to do that is "to understand what sort of psychology helps or hinders in those efforts." [2](pg. 11)

In addition to this, the research report published as a book, *"Understanding Crowd Behaviours: Supporting Evidence"*, was written by a team of specialists in organisational psychology from Leeds University Business School, meant to be a guide for anyone researching about how to manage crowds. It outlines the behaviour of crowds in various situations, by reviewing several theories and researches conducted on the topic. It is very in-depth and is meant to serve as a way to foresee issues and be prepared when faced with large crowds. [1]

## 4 Crowd Behavior during a pandemic

To observe how these behaviours actually arise in real-life situations and how they affect them, we may examine the current situation of the world.

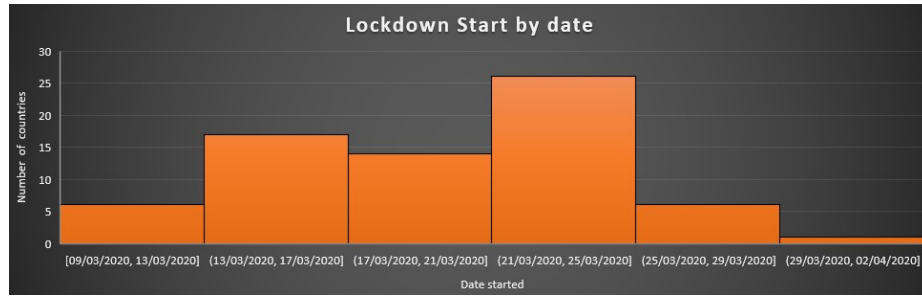
### 4.1 How it Started

Since early January 30, 2020, a new strain of the coronavirus emerged in the Chinese population and over the months, the virus rapidly spread *globally*. On March 11, 2020, the WHO announce the World Health Organization (WHO) declared the COVID-19 outbreak as a pandemic.

WHO claimed to have made this announcement to urge the world into action as the rising levels of the virus were alarming and despite the major outbreaks, most countries were not taking as much precautions as they should. [4]

## 4.2 On a Broader Scale

It turns out that WHO made a wise decision, as shortly after they declared the virus a pandemic, many countries took action and began implementing restrictions in various forms from city-wide curfews to nation-wide lockdowns. In a cascading effect, one after the other countries around the world went into a national lockdown, enforcing social distancing laws, etc. This is also an example of crowd psychology on a broader scale. Countries took note of what worked and implemented it themselves.



**Fig. 1.** A histogram of countries going into some form of lockdown for the month of March 2020. [5]

The first country outside of China went into lockdown in the beginning of March, and most others followed very soon. [5]

## 4.3 Why this Matters

However, despite the preventative measures, many still failed to control the virus spread, and the main reason was the public's response. People were not ready for the lockdown, or they simply denied the virus, ignoring the rules in place. Let us see why both the official lockdown and public behaviour are equally important.

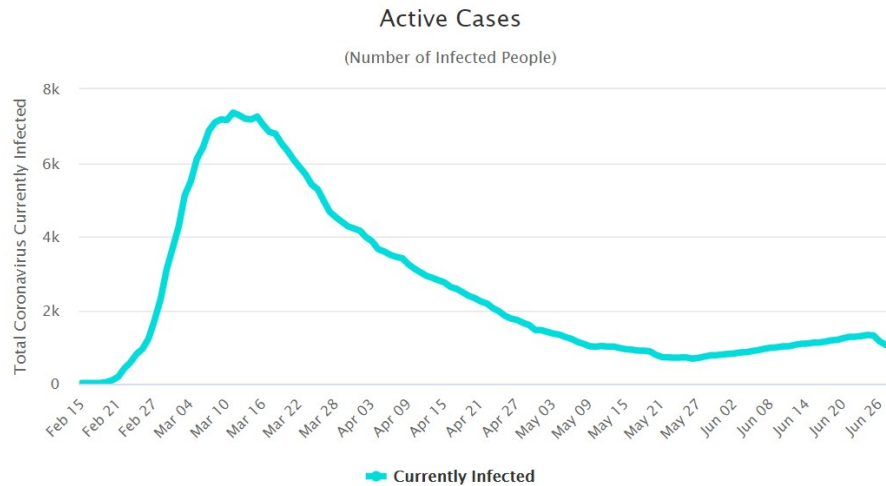
1- If the country does not impose lockdown and rules, not enough people will take steps to protect themselves and others and most will continue to live their regular lifestyle maintaining all risky social interactions without any precautions. The virus will spread rapidly since nothing will be set in place to controlling it, causing a peak in cases and overburdening healthcare facilities.

2- If a country imposes lockdown and share the rules to follow in order to prevent the virus spread, but the citizens still chose to ignore them and do not follow these rules, there is still zero payoff in terms of virus control. The virus spread will still not stop, and the additionally the economic challenges arising from the lockdown will be for naught, ending in negative payoff.

**In real life**, how the crowd reacts may not seem as relevant if you assume that imposing rules will be enough to get the situation under control. However, recent matters have shown just how much of a difference it truly makes when individuals act as one.

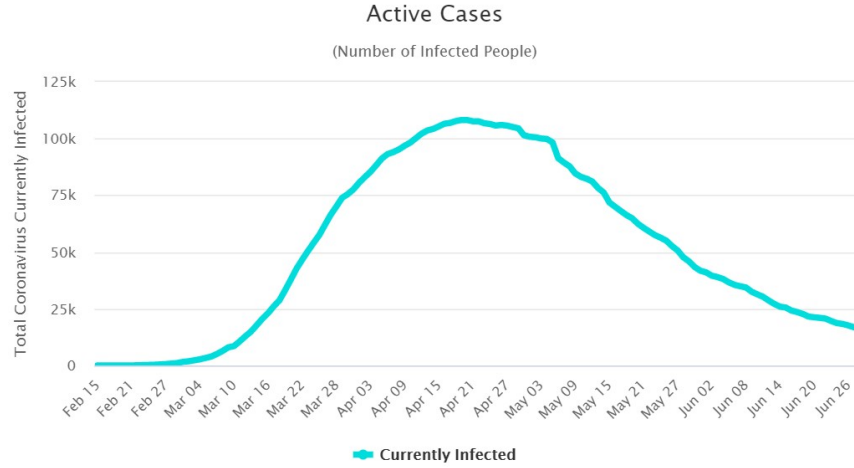
Following Italy's rapidly increasing number of cases due to a poorly timed football match, the country quite quickly become an example of what *not* to do in current times. [8] However, at the same time, South Korea's response to the virus began to be cited as note-worthy effort and a lesson for other countries. [7]

The key difference in both the countries' responses was not only how the authorities handled the outbreak, but also how the citizens responded to it. In Italy, the initial lockdown was met with much protests and many ignored the SOPs while leaving their house. This behaviour reinforces the psychology of the mob, as different minded individuals eventually adhere to the same rules. The indifference of Italian citizens lead to a spike of infections and a slower rate of recovery. Meanwhile, under similar conditions, South Korea rapidly squashed the rate of infections due to their citizen's cooperation.



**Fig. 2.** A timeline of active COVID-19 cases in South Korea [8]

The figure above shows us the South Korean rate in cases while the figure below show Italy's. We can see that even though the countries were in very similar situations and the authorities responded similarly, there is a drastic contrast on how they both were able to quell the rapid spread of the virus. The curve rises and falls rapidly in Fig.2 but in Fig.3, even though it rises just as quickly, it is slow in its descend.



**Fig. 3.** A timeline of active COVID-19 cases in Italy [9]

Through these statistics, we can rightly infer that the behaviour of individuals gets shrouded in the behaviour of the crowd. Certainly, there were quite a few citizens in Italy abiding the regulations, but either they were swayed by the crowd - if everyone else doesn't care, why should we - or their numbers were so minimal that their effect was negligible.

#### 4.4 The Flipside

In all our examples, we have been focusing on the power of the crowd to make a positive change for everyone's betterment, but crowds aren't associated with the "mob" for no reason. All the negative connotation that word carries is rooted in the behaviour of the crowd as an irrational collective. A lot of times a negative response spreads faster and fiercer than a positive one.

**Morally Ambiguous Grounds:** When individuals are responsible for their own actions, they are known to be more accountable and cautious. A crowd, however, masks the individual opinion, simultaneously empowering the unjust and muffling the weak. At the very beginning of the spread of COVID-19, an unfortunate wave of ignorance and rampant racism caused many to use racist terminology to refer to the new virus owing to the fact that it had first emerged in China. Before the WHO officially named this strain of the virus on 11th February 2020, it was beginning to be commonly called the "Wuhan virus" or the "Chinese virus" due to its origins. [11] Unfortunately, this behaviour was aided by world leaders[12], which made the mob mentality more cohesive and

made it seem that there was no harm caused since "everyone" was doing the same thing.

**Mass Panic:** Another negative impact of crowd psychology is the mass panic that can and *arise* in crises. During the COVID-19 quarantine restrictions, many flocked to the supermarkets to stock up for as long as they could, but this kind of behaviour is not only harmful to the lives of people involved, it is harmful to the economy. It is not rational to stock up for months in advance in the face of uncertain conditions, but in lieu of the anxiety and panic people stock to take as much "control" as they can over their lives and in the process act irrationally and unfavourably. If at these times, individuals think rationally and for the benefit of the crowd and not just the self, then the payoff would end up being much more advantageous to the whole.

## 5 Conclusion

It seems that despite the negative outcomes, crowd psychology helps more than it hinders. In emergencies or unfortunate situations, the crowd is united for the betterment of all and without that organised behaviour and unified identity, things fall apart. Thus, when considering the best possible way to tackling a worldwide health crisis, the focus should be on unifying ideologies and ensuring that the majority is united under the common good, and that mass media is portraying a positive outlook rather than causing needless panic. The most favourable outcome would then be one where the crowd is neither too indifferent nor too selfish, and everyone is alert not anxious, since without the balance, and the payoff would be negative. And this can only be achieved when the crowd thinks as one.

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