In December 2019, COVID-19 occurred in China and was spread to the entire world. Now, much of the world is gripped by mutant strains in a second wave. COVID-19 is highly infectious, widely spread, and rapidly progressing, posing a significant threat to the physical and mental health of some populations. Herein, we analyze the prevention management of COVID-19 from epidemic psychology in order to provide a new sight for overcoming the psychological problems of COVID-19.

An outbreak of fatal epidemics may be followed by fear, panic, suspicion, and pandemics stigma. The term ‘epidemic psychology’ has a double meaning, referring not only to the particular social psychology of epidemics but also to the fact that psychology has its epidemiological nature. It can also spread rapidly from person to person and significantly impact the collective and the individual. Epidemic psychology seems to involve at least three types of psychosocial epidemics. The first is the spread of fear. The second is the spread of explanations and moral disputes, and the third is the calls to action. Therefore, any society dominated by epidemic psychology may simultaneously experience individual and collective panics, an outbreak of explanations for the cause of the epidemic, a string of moral disputes, and a host of control strategies aimed either at curbing the epidemic itself or controlling the further spread of fear. From a sociological perspective, the spread of fear, interpretations, and actions can infect everyone in society. Just as some epidemics can infect almost everyone, almost everyone fears the diseases. This distinctive collective social psychology has its epidemic form, and can be activated by other crises (war, revolution, and different pandemic periods have similar characteristics) besides those of disease and human interaction. It is thus a permanent part of the human condition, and widely known to be such. Major pandemics have erupted every few years since SARS (Severe acute respiratory syndrome) disappeared in 2003. When a pandemic strikes unexpectedly or is incredibly destructive, it can be more frightening and produce more extreme reactions and diverse responses.

As the COVID-19 pandemic swept the world in late 2019, Zhang...
and Yang conducted a cross-sectional survey with convenience sampling from February 11 to February 16, 2020, in China and concluded that in the early stages of the COVID-19 pandemic, high levels of depression were prevalent among the public.[1] There are many similar studies during this pandemic. However, this method would not enable confident diagnoses to be made, and very few longitudinal studies about how people’s self-scored or clinician-scored symptoms progress over time. Based on the assessment, Wright and his team concluded that the mental health risk in the early stages of the COVID-19 pandemic is higher than the SARS outbreak and even comparable to the rates shown in the 9/11 attacks.[2] It is fair to say that the COVID-19 pandemic has brought widespread fear, some suspicion, and degrees of stigma. While the advent of the current pandemic has brought forth conspiracy theorists and deniers of the severe health impacts, there are few panic claims. There is substantial literature that substantiates the oft-made claims for panic in the face of disasters of all kinds and the human responses to events that may foster it when it does occur. So-called ‘panic buying, which did arise in the UK, for example, is a behavior pattern at the beginning of lockdown. Moreover, this is not just an accidental phenomenon. In China, the whole nation was “grounded” in the early stage of the epidemic, but people were not idle for a moment. From masks to ShuangHuangLian, people were buying up and stockpiling goods, and the enthusiasm for shopping was no less than that of a shopping festival. The panic buying eventually subsided amid clarity in the official media. Even now, looking back, we can see, “How crazy was that?”. However, the truth is, every major disaster is accompanied by irrational shopping behaviors. In 2011, when the Fukushima nuclear power plant in Japan leaked, coastal residents went crazy buying salt; In 2003, during SARS, people bought up banlangen. In almost every crisis, people scramble for rice and vegetables, and this time is no exception. Why does such irrational buying occur in every situation? The concept of a “scarcity mentality” is described by Cedhil Mullenathan, a tenured Harvard professor and MacArthur Grant recipient, and Erd Shafer, a psychology professor at Princeton University, in their book Scarcity.[3] Scarcity mentality, also known as “scarcity captures the brain”, is a scarcity mentality formed by the scarcity of things. Nevertheless, this “scarcity” is no scarcity in the real sense but the gap between the perceived level of resources and the desired level of resources. In layman’s terms, it is the feeling of having less than people need. Like when we snap up rice, are we short of it? When nuclear power leaks, coastal residents rush for salt. Are salt shortages real? Not really! So the scarcity mentality is highly subjective. Emotionally, scarcity directly leads us to panic. There is a gap between what we want and all the resources (perceived) that others have, and I do not, and people feel threatened. Such feelings can directly lead to anxiety and panic attacks. To relieve the anxiety and panic, we will take action to join the buying crowd. In buying, we find that others are also rushing to purchase, and the supplies are decreasing, which further aggravates the perception of “scarcity”, and further panic, falling into a vicious circle.

What exactly are we “scarce” in the early stages of the COVID-19 pandemic? At that time, human beings were faced with a new unknown virus and had not yet figured out how much harm it would bring, what the routes of transmission were, and how high the mortality rate was (of course, it is still not fully understood until today), which directly caused people to lose a sense of control. According to Maslow’s hierarchy of needs, as Figure 1 described, we know it relates to our survival and security needs. These two layers are the most basic, the lowest requirements, so we feel insecure. In other words, people panic about buying rice, vegetables, and Shuanghuanglian, actually because our “scarce” sense of security is out of our survival needs.

While there is no specific treatment that could cure COVID-19, individuals, towns, and cities often respond rapidly to develop a routine, at least for some time. And then, the prevention and control of COVID-19 becomes normalized and institutionalized. It is essential to realize that certain areas may have significantly higher mortality rates with the associated impact on psychological status in the deadlier areas than relaxing behavioral mitigation in those areas with much fewer deaths.

Besides, many pandemics display phase characteristics and wave nature. Pandemics’ wave nature has been recognized since the Spanish Flu time that began in 2018 despite practitioners not identifying the viral cause until many years later. There is no doubt that the current pandemic is an existential, worldwide waveform of highly infectious illness. Of critical importance now is the continuing mutation of the virus, which can give rise to second and succeeding waves as variants of the original virus become established because they are the mutations that confer more significant impacts due to changes in the transmissibility and lethality of the virus.

With the outbreak of COVID-19, people have changed their social life to prevent and control the spread of the coronavirus pandemic. In March of this year, India’s social controls were loosened, and social distance was completely abandoned by holding festivals of traditional culture. As of December 13, 2021, India’s cumulative number was 34.7 million, according to official

![Maslow's hierarchy of needs](image-url)
data. However, it is estimated that it will take decades and at least millions of additional deaths to reach 70% of herd immunity.

Last year, the extraordinary success of endeavors was to create vaccines in very short timeframes. However, the birth of the vaccine has not only brought hope and confidence to the public as expected, but it has also brought a series of problems. The study showed that people were willing to take a COVID-19 vaccine. Populations are now engaged in a tense circumstance of endeavoring to control the virus through vaccination and avoid creating further variants of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that may not be as responsive to the vaccines. However, the duration of immunity to COVID-19 induced by infection or vaccination is not known. Some reports suggest that antibody-mediated immunity may last for only a few months. Little safety data is available. How well the vaccines work in older people or those with underlying conditions is still unclear. Whether the vaccines prevent transmission of SARS-CoV-2 or mainly protect against illness is mostly unknown. How quickly does protective immunity wane? How severe might re-infection be? Will we have annual seasonal outbreaks? All these mentioned above are still poorly understood. Also, there are proportions of populations that are resistant to receiving vaccines. Also, does the current situation in India mean that the vaccine is failing? The vaccine coverage rates in India currently rank only second to the United States and China. However, given India’s large population, about 0.3 billion vaccine doses have been administered, which is far from sufficient to stop the spread of the coronavirus pandemic. The emergence of mutant strains, delta-plus, and low vaccination rates will hasten the arrival of a third wave. According to China’s National Health Commission, a total of 1.5 billion vaccine doses have been administered, which lays the foundation for building an immune barrier, and a high vaccination rate will help reduce the rate of mutation of the virus. In addition, recent reports of imported cases in China suggest that vaccination, while reducing the risk of infection to some extent, does not guarantee vaccinated people not to be infected. The good news is that the rate of severe cases in vaccinated patients is much lower. As the winter with a high incidence of respiratory diseases is approaching, the Chinese government has started booster vaccination. The so-called booster vaccination is another injection of the same vaccine six months after the second dose of the previous vaccine, which is of great significance to protect the susceptible population and effectively curb the spread of the epidemic.

Meanwhile, this situation creates grave concerns for vast numbers of people and has exposed a spectrum of public opinion about lockdown, isolation, and quarantine. The multitude of control measures proposed to contain the disease may, in turn, greatly increase the sound and fury of moral disputes. Many of the proposals to limit contagion may cross over and threaten our traditional norms and practices. Trade and travel may be disrupted, personal privacy and freedom may be seriously violated, and health education may be implemented on issues that are normally never discussed, such as wearing masks and vaccine injections. People with pre-existing medical conditions (such as diabetes, heart disease, and asthma) appear to be more susceptible to having a poor mental state; it may be attributed to the fact that they fail to get treatment in the shadow of the COVID-19 pandemic, timely. Previously, the outbreak also rebounded in China after the travel boom during the National Day holiday. When will this epidemic end, and when will we be able to take off our masks, which is indeed a chronic stress to our mental health. Therefore, while preventing and controlling COVID-19, we must not ignore the concern for the public’s mental health. We must do a good job in emotional management and social support related to COVID-19, so as to alleviate the psychological problems of the general public.

Only when the coronavirus pandemic situation is entirely under control can we guarantee the public’s routine work and life and eliminate the psychological barriers caused by the coronavirus pandemic. Thus, we have to switch the previous measures to new strategies as soon as possible to guarantee the prevention and control of pandemics. The coronavirus pandemic affects and permeates public life in many ways. Large-scale testing is required, and connections must be tracked to find all the contacts and quarantine for at least 14 days to avoid an outbreak again. Barry Bloom, a Harvard school professor of public health: This is not the most sensitive detection globally, but it is a screen, making people aware of their obligation to avoid infecting others.

It is a remarkable fact that with the coronavirus pandemic, the world must function as one community to maximize control. Epidemic psychology can be overcome only when new routines and assumptions for dealing directly with epidemics are firmly established, a process that requires collective and individual action.

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YR conceived and designed the project. HL performed the literature retrieval and drafted the article.

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