



# The Psychological Impact of COVID-19 on Chinese Individuals

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COVID-19 not only affects the physical health of Chinese people, but also their psychological health. This article mainly summarized the causes, clinical manifestations and preventive measures of COVID-19 impact on psychology of Chinese people, and presented two representative cases at the same time.

**Key Words:** Psychology, COVID-19, Chinese people

As of February 26, 2020, 78195 cases of the 2019-new coronavirus (COVID-19) were reported in China, and among these, 2718 resulted in death.<sup>1</sup> Like SARS and MERS, the coronavirus can lead to severe respiratory problems, and human-to-human transmission has been confirmed.<sup>2</sup> The outbreak, which began in Wuhan, has now spread across China to different parts of the country and the world. Panic has spread throughout China.<sup>3</sup> More alarming than the number of deaths is that several doctors and nurses have also died while fighting against the virus, despite their expertise.

Under normal conditions, people try to maintain a stable state of mind and harmony between themselves and the environment. However, when faced with an urgent event, this internal balance is lost. The body immediately mobilizes physiological and psychological responses in an attempt to deal with the emergency. This is referred to as the stress response. An appropriate stress response can assist people in paying adequate attention to the epidemic and actively preventing and remedying

it; however, an excessive response can drive people to exaggerate the seriousness of the epidemic and live in constant fear.

### Causal factors

Mental disorders related to COVID-19 are the result of biological, social, and psychological factors.

#### *Biological factors*

Biological factors include the virus, its metabolites, and the body's excessive immune response to these foreign substances, which results in fever, dyspnea, and other clinical symptoms. This can lead to brain hypoxia and/or carbon dioxide retention, edema, vascular dysfunction, and other pathological changes. These, in turn, can disrupt the brain's higher neural activity. In addition, some drugs used in treatment, such as antiviral drugs, can cause drug-induced mental disorders: for example, glucocorticoids can lead to excitement, depression, tension, insomnia, hallucinations, and other symptoms.<sup>4</sup>

#### *Social factors*

Public psychology is often very fragile during outbreaks of infectious diseases. Amid a lack of psychological endurance in the public, inappropriate or excessive release of panic-triggering information by television, radio, newspaper, magazine, Internet, and other media sources can have a negative impact on the population. From the perspective of communication psychology, during such times, people tend to carry an affinity for negative, threatening, or informal information and for ignoring or doubting positive and formal information. Furthermore,

**Received:** March 12, 2020 **Revised:** March 25, 2020

**Accepted:** March 26, 2020

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•The authors have no potential conflicts of interest to disclose.

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during disease outbreaks, rumors and speculation abound; authorities in endemic areas take emergency measures, such as sealing cities and roads; streets become quiet; the economy can struggle; the stock market is volatile; there is a rush for supplies and household items; pedestrians remain heavily protected and armed; and advertisements and posters on the disease are ubiquitously posted, all of which can make people feel nervous and scared.

#### *Psychological factors*

The COVID-19 virus is a serious threat to the health and life of patients themselves, as well as the surrounding population given its short incubation period, rapid onset, rapid change, strong infectivity, and more.<sup>5</sup> Therefore, the disease itself is a stressor, causing excessive and continuous stress and possibly leading to mental disorders, primarily manifested as anxiety and depression.

#### **Clinical manifestations**

COVID-19-related mental disorders mainly manifest as anxiety, depression, loneliness, stress and fear, excitement, or a combination of all these. Clinical manifestations can be broadly divided into five types, although symptoms can overlap.<sup>5</sup>

#### *Anxiety*

Quarantined people often worry, hoping to be removed from quarantine as soon as possible. Uninfected people fear that they may get infected by others. Some people show an increased desire for cleanliness, such as repeated hand-washing, excessive sensitivity to bodily changes, excessive reliance on medical staff, increased irritability and violence, restlessness, insomnia, palpitation, trembling, frequent urination, and other symptoms of neurological dysfunction.

#### *Depression*

Clinical manifestations of depression include dull-looking, poor appetite, weight loss, loss of interest, irritability, and so on. Some people may suffer from pathological exaggeration of the dangers of the disease and lose confidence in treatment, as well as society. Some write suicide notes, and a few even commit suicide.

#### *Loneliness*

To prevent cross-infection, patients are mostly admitted to separate wards and a prolonged period of quarantine after discharge. Being alone for an extensive period, these patients may suffer from loneliness. Uninfected people are also kept indoors and quarantined to prevent infection, and many say they are “driven crazy.”

#### *Stress and fear*

Patients feel panic in regard to the disease itself. Medical staff wear thick isolation clothing, so the feelings of intimacy and

trust that a patient should feel around medical staff are replaced by fear. The increasing number of COVID-19 infections and deaths can also increase patient’ fear.

#### *Excitement*

Some patients exhibit symptoms of excitement after they are informed of their infection. Such patients experience excitement, impulsivity, and aggression. They do not cooperate in treatment, deny their illness, or refuse to be isolated. According to media reports, some patients refuse to be quarantined, repeatedly ask to be released or attempt to flee the hospital, even when confronted by police. These patients often suffer from tension, fear, and anxiety, and are easily provoked. The use of glucocorticoids in treatment can also cause mood swings, excitement, agitation, lack of sleep, increased speech and movements, irritability, and other symptoms.

#### **Preventive measures**

The prevention of COVID-19-related mental disorders should focus on the following aspects: creating humane isolation environments, ensuring effective communication, and providing adequate psychological services.

Steps should be taken to strengthen health education, eliminate excessive fear of COVID-19, and eliminate social prejudice and social discrimination. Hospitals should provide patients with a quiet, bright, spacious, comfortable, convenient, and humanized isolation environment for observation and treatment. Special wards installed with protective facilities and constraints should be set up to facilitate monitoring and to prevent suicides, attacks, escape attempts, and other undesirable events.

It is also important to provide scientific and appropriate information to mitigate public’ anxiety, pessimism, and other negative emotions. This includes general information on COVID-19, current prevalence statistics, treatment and control methods, and ongoing progress, so that the public can feel confident and in control. Medical staff should communicate with patients frequently and in a timely manner to understand and deal with their psychological status and needs. Moreover, it is essential to provide safe communication channels, such as telephones, intercoms, mails, video recordings, Internet access, and others, to ensure that patients are able to maintain contact with their relatives and friends outside the hospital, thus reducing patient loneliness.

People with psychological problems should be able to consult with clinical psychotherapists to detect and deal with their issues quickly. Personnel working in respiratory and infection departments and other non-psychiatric staff in isolation wards should be educated to identify and prevent psychological problems, promote the transition of medical services to a bio-psycho-social integrated medical model, and improve the quality and level of medical services. Early detection of various psychological crises, effective intervention, and treat-

ment with psychotropic drugs should be conducted under the guidance of psychiatrists. The basic principles include personalization, selecting targeted drugs based on clinical symptoms, and paying special attention to adverse drug reactions.

### Two representative cases

The prevalence of COVID-19 in China has had a significant psychological impact on both infected and uninfected people.

#### *Infected people*

After endotracheal intubation and mechanical ventilation, a patient with COVID-19 infection experienced significant mood fluctuations, including momentary excitement, increased blood pressure, and occasional irritability. The patient had hallucinations and refused intravenous fluids, temperature measurement, and food. The psychiatrist diagnosed the patient as having a transient mental disorder and gave him diazepam, morphine, and olanzapine sedative medication. Through positive communication and psychological nursing, the patient's mood became more stable, and he cooperated with the treatment given until he recovered and left the hospital. Transient mental disorders are caused by a sharp or persistent psychogenic factor. When the pathogenic factor is removed, the patient can recover, and the course and prognosis of illness depends on whether mental factors can be eliminated in time.

#### *Uninfected people*

One patient who was not infected with COVID-19 exhibited insomnia, irritability, shouting, singing, throwing things, and eating constantly after being isolated at home, although his emotions were basically normal. No psychotic symptoms were found. Psychologists deemed that this was a psychological stress behavior caused by excessive fear of the dangers of the disease and the stress of being isolated. For psychological crisis intervention treatment, it was recommended that the individual carry out self-psychological transfer treatment, such as appropriate physical activity at home, listening to light music, reading, scheduled eating and sleeping, and maintaining a normal life. After the above psychological crisis intervention treatment, he felt more positive and stable.

To summarize, psychological activities affect physiological functions, and serious psychological problems can reduce the

immunity of the human body and affect the outcome and prognosis of disease. Positive and effective psychological counseling for people can ease their psychological barriers, enhance the confidence to overcome disease, and promote an early recovery. COVID-19 was a sudden disaster for the Chinese, and people did not know enough about it. Studying the COVID-19 epidemic can provide a scientific and theoretical basis for an appropriate response to similar public health events in the future. In addition, we must believe that scientific and reasonable work-flow, superb medical skills, and careful psychological care will assist in beating the epidemic.

## AUTHOR CONTRIBUTIONS

**Conceptualization:** Jing Wang. **Data curation:** Jing Wang. **Formal analysis:** Jiu-Xiang Wang. **Funding acquisition:** Jing Wang. **Investigation:** Jing Wang. **Methodology:** Jing Wang. **Project administration:** Guang-Shan Yang. **Resources:** Jing Wang. **Software:** Jing Wang. **Supervision:** Guang-Shan Yang. **Validation:** Jiu-Xiang Wang. **Visualization:** Jiu-Xiang Wang. **Writing—original draft:** Jing Wang. **Writing—review & editing:** Jing Wang. **Approval of final manuscript:** all authors.

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