

Letter to the Editor

Our mind-body reactions to COVID-19

Dear Editor,

Life is dangerous. In addition to accidents and natural or man-made disasters, we are all almost continuously exposed to germs, chemicals, and toxins that can cause disease. The cells in our bodies are continuously changing and can become malignant tumors. However, some people somehow manage to stay healthy for the majority of their lives. The Black Plague of the 14th century killed nearly two-thirds of the population of Europe and over 75 million people worldwide (of an estimated total population of 350 million), yet some individuals who seemed "magically protected" somehow survived it¹. Today, the novel severe acute respiratory coronavirus 2 (SARS-CoV-2) is continuing its worldwide spread, increasing anxiety levels of individuals around the world². A study³ of the the H1N1 outbreak showed that individuals experienced increased anxiety and acceptance of the uncertainty of the pandemic .

Different pathogens cause various illnesses and a resulting burden of disability. However, a growing number of anthropological, epidemiological, sociological, and psychological studies reveal that personality, beliefs and expectations, lifestyle, living situation, and environment also have important impacts on an individual's risk of illness⁴. During the pandemic, increased anxiety has led to an increase in certainty-seeking behaviors such as drinking, eating, online streaming, social media browsing, and reduced exercise. Some people constantly ask friends and family members the same questions or check the news constantly, hoping to calm their fear and anxiety. The disease caused by SARS-CoV-2, COVID-19, has (as of this writing) spread to 196 countries and impacted 950,652 people; the illness has a mortality rate of 19%⁵. People around the world are taking all possible preventive measures to reduce the spread of the pandemic. However, because it is a novel virus, humans are more vulnerable to this disease than to more well-known dangers, such as the seasonal flu or car accidents⁶. Furthermore, the human brain is good at anticipating the worst. Due to the present situation with COVID-19, people are worried about issues such as their work, their children's education, and quarantining at home⁷.

Thousands of people die every year due to influenza. However, most people believe that a flu shot will protect them from influenza, which reduces their anxiety about flu infections. COVID-19 is a novel virus, and vaccination is yet developed, which makes it more frightening than the seasonal flu. These fears are also fueled by a lack of information about the virus. Especially during the early stages of a pandemic, there is typically limited information as scientists continue to research the organism and its health implications. Without reliable information, people may behave in ways that do not align with the risk. For example, the Centers for Disease Control and Prevention (CDC) does not currently recommend the use of surgical masks to prevent the spread of COVID-19, but anxiety and a lack of clear information have caused many to purchase (or even hoard) and wear these masks anyway. COVID-19 can lead to flu-like and potentially lethal symptoms; its spread is also stoking people's anxieties and even xenophobia.

Many people feel disbelief and disappointment when they observe such behaviors on the news or social media, finding it difficult to understand why others react in these ways. One potential explanation of illogical behaviors during a pandemic is found in the psychoanalytic theory of self-mechanism. A self-mechanism, or a defense mechanism, is an unconscious psychological mechanism which prevents the negative impact of potentially harmful stimuli. Such a mechanism helps an individual protect themselves and normalize their psychological state by

reducing anxiety. In the case of COVID-19, the potentially harmful stimulus is the novel virus itself. Due to the uncertainty surrounding the virus, individuals feel threatened by it and therefore use defense mechanisms to ease their anxiety and avoid this negative stimulus⁸. Fear drives defense mechanisms, and during the COVID-19 pandemic, this can be seen around the world. Though there are many defense mechanisms, regression is perhaps the most common one for dealing with the virus. Fear and anxiety signal a threat or danger, enabling individuals to engage in adaptive responses. Currently, many individuals are in a state of panic due to a situation in which they are unsure of everything.

For many, this adaptive behaviour has taken the form of “panic buying” and hoarding household items, such as toilet paper, hand soap, antibacterial supplies, and canned or dry food. Although there has been no indication that these supplies might become scarce, individuals have lost their sense of control, so they stockpile or hoard supplies as a defense mechanism. Although not everyone’s adaptive behaviour involves panic buying, when some individuals stockpile supplies, others become anxious about limited supplies and do the same. This then becomes a case of blindly following the crowd. Many individuals also worry that social systems might fail, which leads them to buy basic supplies in unnecessary quantities⁹.

Individuals who feel that they understand the future and have a sense of recovering faster from illness, and individuals who perceive less stress in their lives are less likely to contract upper respiratory infections. Similarly, the psychological responses and beliefs of cancer patients are important predictors of death or recurrence. In summary, what we think, feel, and believe can affect our health, our wellbeing, and even our chances of dying.

Conclusions

Various factors can help individuals deal with anxiety and fear, including:

1. Knowledge, or information about the world and how it works;
2. Inner resources, or beliefs that we acquire during development that determine our psychological wellbeing, which includes pleasure, happiness, and a hopeful outlook;
3. Social support, or interpersonal systems; and
4. Spirituality, or beliefs about a higher purpose, order, and morality. During the current COVID-19, strengthening immune function is vital to surviving the infection. Therefore, a balance in the factors supporting our self-mechanism may play an important role in reducing the rate of severe infections. Promoting activities that could support this balance could also help increase survival rates and mitigate irrational behaviors in this climate of high uncertainty.

Conflict of Interest

The Authors declare that they have no conflict of interests.

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