# Chapter 10
# Pandemic Stress Caused by the Infodemic Among Youngsters and the Elderly Population

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## ABSTRACT

*The modern world is facing the acute captivity of pandemics. Despite the modern world's technological and scientific development, the fact that the coronavirus has appeared to be stronger, infects people regardless of their social status, place of residence, financial status, origin, intellectual level, and most importantly, age, seems to be unbelievable. However, the situation is much more complicated especially when the number of deaths increases, and it enslaves almost the world's whole population. Causing certain stress, the pandemic has changed the lifestyles, and education and scientific works are not exceptions. All these changes have their consequences and influence, which are presented in the chapter. Moreover, it reflects the results of Infodemia during the pandemic stress and deals with the psychophysiological indicators of students and scientific circles.*

## INTRODUCTION

The "coronavirus pandemic" can easily be called the 'tragedy of the century'. In fact, the change in lifestyle that people have been accustomed to for centuries, long homestays, work from home, the transition to online education system, the impossibility of living with national traditions (parties, weddings, mourning ceremonies, etc.), closed cinemas, theaters, bans on sports competitions, etc., naturally, requires adaptation to the new environment, and before this takes place, there is a state of stress emerges, which leads to abnormal psychophysiological indicators, deterioration of health indicators, etc. and causes other pathologies.

A new coronavirus - Coronavirus 2019 (COVID-19), declared a pandemic by the World Health Organization (WHO) on March 11, 2020, has infected more than 4 million people and killed 300,000 people in 188 countries (World Health Organization, 2020). Global efforts continue to create effective

therapy for this disease and develop vaccine. Coronavirus 2 (SARS-CoV-2) with increasingly severe acute respiratory syndrome was also detected before. This virus has different and similar features with the viruses we know (Fehr & Perlman, 2015). In fact, these new types of coronaviruses (+) have the largest genomes among viruses with single-stranded RNA genome. The adaptation of viruses in the host organism depends largely on the length of the viral genome. Viruses with small genomes are usually protected by a strong cover. Viruses with large genomes, on the other hand, are more pathogenic and contagious, and have the ability to infect more than one host organism. RNA viruses themselves are divided into 2 groups (+) and (-). (+) RNA chain viruses encode own proteins directly, and the (-) RNA chain must be converted to (+) chain RNA in order to encode the protein because it is a negative copy. This is an additional stage for the reproduction of viruses (Fehr, Perlman, 2015; Leung et. al., 2020; Stadnytskyi, Bax, Bax, Anfinrud, 2020; Richard, Fouchier, 2020).

Coronaviruses include the Nidovirales order, the Coronaviridae family, and the Coronavirinae subfamily. The subfamily includes four genera: Alphacoronavirus, Betacoronavirus, Gammacoronavirus, and Deltacoronavirus. Based on molecular clock analysis on the genomic region of RNA-dependent RNA polymerase (RdRp), scientists believe that the common ancestor of the four coronavirus genes (tMRCA) appeared in 8100 BC. The MRCA of alphacoronavirus, betacoronavirus, gammacoronavirus, and deltacoronavirus was estimated to have appeared around 2400, 3300, 2800, and 3000 BC, respectively. Furthermore, there are assumptions that the history of the natural evolution of coronaviruses has not been properly assessed, and that the history of the coronavirus is older than previous estimations. Coronaviruses like many DNA and RNA viruses, such as herpesviruses, lentiviruses, bornaviruses, filoviruses, and foamy viruses have ancient viral lineage. (Kutter, Spronken, Fraaij, Fouchier, Herfst, 2018; Leung et al., 2020; Richard, Fouchier, 2016).

Different coronaviruses exhibit different host spectra and tissue tropism. Alphacoronavirus and betacoronavirus are commonly transmitted to mammals. In contrast, gammacoronoviruses and deltacoronaviruses can infect birds and fish, and some mammals. By 2019, six coronaviruses were known to infect humans and cause acute respiratory disease. HCoV-229E, HCoV-OC43, HCoV-NL63, and HKU1 cause mild infections of upper respiratory tract, and in rare cases, some of them can cause severe infections in infants, young children, and the elderly. A type of coronavirus identified in 2003, SARS (Severe acute respiratory syndrome), causes atypical pneumonia transmitted by bats. The SARS virus was first reported in Asia and then spread to other continents. The World Health Organization (WHO) has determined that the virus is a new type of coronavirus and named it SARS-CoV. It is estimated that ~ 8,000 people were infected with the virus, and 10% died. Another type of coronaviruses, MERS virus, was identified in the Middle East in September 2012, and Novel Coronavirus 2012 was officially named as Middle East respiratory syndrome coronavirus (MERS-CoV) (Tellier, 2009; Richard, Fouchier, 2020).

The virus, originally named 2019-nCoV by WHO and SARS-CoV-2 (severe acute respiratory syndrome coronavirus-2) by the International Committee on Virus Taxonomy, being a new strain of coronaviruses is also known as Uhan coronavirus, Uhan seafood market pneumonia virus and Uhan pneumonia. The genetic sequence of the new coronavirus genome, a single-stranded RNA virus, has been read. The virus is at least 70% genetically similar to the SARS-CoV virus (also known as atypical pneumonia), which causes severe acute respiratory syndrome. The incubation period of the new coronavirus lasts from 2 days to 10-15 days, and the disease becomes contagious before the onset of symptoms (Richard & Fouchier, 2020).

There are several ways thought which the viruses can spread from person to person. Particles carrying the virus can be a source of danger for people to get infected through coughing, sneezing, hand

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