

## **Psychological Effects of Social Isolation during COVID-19 Pandemic**

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### **Editorial**

Generally speaking, adverse events have a terrible impact on mental health, which can lead to anxiety and depression, but it's not just the mental health we are concerned about [1]. Epidemiological data suggest that both positive and negative psychological processes may also have distinct influences on physical well-being [2]. As we go through the Coronavirus disease-19 (COVID-19) pandemic, the Centre for Disease Control and Prevention (CDC) recommended social distancing as a first-line defence against the spread of the infection causing a sense of loneliness which is an important contributor to physiological stress processes [3].

Loneliness or social isolation has an impact on neuroendocrine, immune, and cardiovascular responses as it is associated with higher blood pressure [4], and impaired or under-active immune function [5]. It was also found that high levels of momentary or daily experiences of loneliness were associated with elevated levels of the hormone cortisol, an indicator of stress [5].

For the public, quarantine isolated persons who have been potentially exposed to an infectious agent from the general community. However, we are concerned about the consequences of extreme measures and more restricted social distancing as they create a heavy psychological load that may precipitate symptoms of post-traumatic stress disorder and depression [6]. We have to be ready to support the longer-term wave of poor mental health that can follow the COVID-19 pandemic. This will require alertness in our clinical systems and deployment in efforts such as stepped care approaches that we have found to be effective after other mass traumatic events [7].

In humans, acute social isolation evokes a neural "craving" response to social cues [8]. Midbrain regions showed selective responses to food cues after fasting and to social cues after isolation. Substantia nigra pars compacta and ventral tegmental area (SN/VTA) activity were higher in folks that self-reported wanting food or social interaction more, following deprivation [9]. The multivariate pattern of SN/VTA response was similar for food and social interaction when craved. Folks that are

forced to be isolated crave social interactions similar to the way a hungry person craves food. Despite the fact that isolation lasted only ten hours, and also the participants knew exactly when it might end, participants reported more loneliness and social craving at the top of the day than they did at the start [8]. Since COVID-19 has become a global pandemic, the human mind exposed to great stressful threats as there is invisible rapidly spreading infection threat the life, big cities, and countries breaking down in all fields. These stressful thoughts majorly affected the psychological, physiological function of the body. Therefore, the brain tries to find a defence mechanism against these thoughts to alleviate the situation [10]. But are these mechanisms could be helpful?

This depends mainly on how the brain defences this stress. It may be in harmful ways as sometimes people separate themselves from all events around by denial of present such infection and disregard reality, and they rouse others to neglect infection. This action happened in big countries that hamper the control of infection and help in the spread of it rapidly. Others try to distract themselves from all events in many ways; some of them by healthy methods through practice a hobby or sport. Others, by harmful ways as overeating unhealthy food, and this is maybe a distracting tool or physiological as adrenal gland secretes cortisol in stressful actions, and this hormone increases the appetite [11].

Some persons increase their distance from any source of infection and follow all rules of cleanliness. They try to identify the aggressor and fight it. This bolsters the sense of safety, an extreme example of it (quarantine) where people isolate themselves [10].

All these defence mechanisms are psychological strategies that unconsciously used to protect a person from anxiety, according to Sigmund Freud, who noted several ego defenses that he refers to throughout his written works [12]. Pay attention to the thoughts and try to spread all correct information about the COVID-19 focus on some of the strategies that may help to control the right thinking.

Pandemics increase the stress and anxiety for all people. Keep-

ing mental health stable is an important step during pandemic (as COVID-19) as large articles suggesting parent's depression and anxiety lead to a negative impact on children [13]. Children are likely to gain their stress, worry, anxiety, fear in all types like fear of dying, fear of relative dying, and fear of receiving medical treatment. Closing schools will lose them a sense of stimulation that is provided by the environment and have less chance to be with their friends and get the social support that is essential for good mental well-being [14].

World health organization (WHO) advises talking to the child and explaining the nature of the virus and mood of transmission, besides giving them more love and attention needed to resolve their fear and deal with news they are reading or watching [14].

The worldwide pandemic of COVID-19 induced widespread panic and anxiety in persons with serious and fatal complications can affect patients with serious mental illness. The mortality rate is higher in psychiatric patients reach about 7% compared to 1% in the general population [15]. With increase public fears from infection and decrease social and economic activities, this will increase psychological problems like depression, anxiety, fear, guilt, and anger [15]. Finally, the harmful effect of the virus on CNS that provokes systemic inflammation and increases the release of inflammatory cytokines as IL1b, IL6, which leads to psychiatric morbidity and mortality, is considered another problem [16].

### Conflict of Interest

The authors state that there are no conflicts of interest.

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