

# Covid-19 Induced Psychological and Psychosocial Impact in At Risk Populations During Quarantine: A Review

Dr. Alka Misra<sup>1</sup>, Dr. Akanksha Srivastava<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Zoology, DSN PG College, Unnao, Uttar Pradesh, India-209801

<sup>2</sup>Assistant Professor, Department of Chemistry, DSN PG College, Unnao, Uttar Pradesh, India-209801

## ABSTRACT

Corona Virus Disease (COVID-19), due to the infection of highly contagious and fatal Corona Virus, massively and adversely affects human life worldwide. COVID-19 pandemic has led to a rise in fear, anxiety, stress and depression among the population. Consequential events during pandemic pressed mind with fear of infection, and thereby changed life satisfaction and mental health. Perception of unexpected events in life and finding it difficult to cope with them are also predictors of anxiety stress and depression. In this review the complex relationships between fear, stress and anxiety, the development of depressive symptoms, prevention and general measures for reducing fear of COVID-19 and stress in at risk population have been discussed.

**KEYWORDS:** Covid-19, Stress, Anxiety, Depression, Quarantine, Students, Medical Staff, Healthcare workers.

## INTRODUCTION

Corona Viruses, the large family of crown – like viruses, affect human beings through zoonotic transmission (Lokhandwala *et al.* 2020). COVID-19, a new disease due to infection of Corona Virus, particularly affects the respiratory system and is highly infectious, with a long incubation period. The World Health Organization (WHO) has named the disease Corona Virus Disease-19 (COVID-19; Wu *et al.* 2020). The Outburst of COVID-19 pandemic first occurred from human sea food market in Wuhan City of China during December 2019 (Xu *et al.* 2020). Its remarkable ability to spread and rapid expansion around the world has led the WHO to consider it a Pandemic (Rothan and Byrareddy 2020). COVID-19 affects different people in different ways. Most infected people will develop mild to moderate illness and recover without hospitalization. Fever, dry cough, trouble in breathing, tiredness, loss of taste or smell, sore throat, diarrhoea, aches and pains, chills are the symptoms of early stage after infection. Serious symptoms are difficulty in breathing or shortness of breath, acute respiratory problem, kidney failure and cardiac injury appeared as the leading cause of mortality (Zhou *et al.* 2020). Transmission of this disease occurs primarily between people through direct or close contact to infected person. The coughing sneezing, saliva and respiratory secretions from infected person are known to infect a healthy person (Wang *et al.* 2020).

## PSYCHOLOGICAL AND PSYCHOSOCIAL IMPACT OF COVID-19

At present the World is facing very critical situation caused by pandemic, and besides, the development of these pathological symptoms in patients, several behavioural mental as well as social abnormalities have also been reported to occur in population worldwide (Saladino *et al.* 2020). To fight against this emergent infectious disease drastic measures have been taken, such as closing educational organizations, cancelling sport events and other gatherings. Badly affected cities were forced to undergo lock-down to control the transmission of pandemic. People in the wave of this catastrophic epidemic would inevitably develop varying degrees of anxiety depression, panic and insomnia. In this paper the psychological, mental and social effects of the pandemic on the population, especially in patients, students and health care professionals has been reviewed.

Several studies of pandemics faced overtime, such as Ebola, SARS, Equine Flu, H1N1, and the current COVID-19, show that the psychological effects of contagion and quarantine is not limited on the fear of contracting the virus (Barbisch *et al.* 2015). There are some elements related to the pandemic that affect more the population such as separation from loved ones, loss of freedom, uncertainty about the advancement of the disease and the feeling of helplessness (Li and Wang 2020). These aspects might lead to dramatic consequences (Weir 2020) such as the rise of suicides (Kawohl and Nordt 2020), Suicidal behaviours are often related to the feeling of anger associated with the stressful condition among people taking look after to patients and /or lived/live in highly affected areas (Mamun and Griffiths 2020).

Psychological /Psychiatric presentations and mental disorders are common among COVID-19 patients (Wang *et al.* 2021). Available research on mental health problems associated with COVID-19 is limited to case reports/series, self-report questionnaire surveys and mental disorder surveys (Parra *et al.* 2020). A survey report of 460 COVID-19 patients (patient with critical condition excluded due to ethical issues) with a response rate of 92.3% (460/498) in Hubei, demonstrated that the incidence rate of depression, anxiety, sleeping disorders and physical disorders of COVID-19 patients was 49.05%, 56.60%, 67.90% and 69.80% respectively, all of which were significantly higher than those of the general population, in which the prevalence of anxiety and depression accounted for 28.8% and 16.5% respectively (Wang *et al.* 2021). More strikingly, nearly one-fourth of the COVID-19 patients had at one point intended to conduct self mutilation or suicide, and 28.3% had asked for psychological counselling. The possible after-effects of COVID-19 pandemic include a considerably greater incidence of depressive mood and anxiety among students during pandemic wave. A survey performed on school going childrens of 03-18 years age during COVID -19 pandemic reported that they are more at risk of developing anxious symptoms (Origiles *et al.* 2020). Parents reported emotional and behavioural change observations in their children during the quarantine. Symptoms developed are difficulty in concentration (76.6%) boredom (52%) irritability (39%) restlessness (38.8%) nervousness (38%) feeling loneliness (31.3%), uneasiness (30.4%) and worries (30.1%). Similarly, in an online survey conducted on the general population in China found that College students are more prone to experiencing stress anxiety and depression than others during COVID-19 pandemic. (Li *et al.* 2020). In another survey from Ecuador for undergraduate students (n=640, between 18 to 47 years old) data reveals after statistical prediction that females suffer higher levels of fear of COVID -19 than their male counterparts, as observed in the few similar studies carried out in other countries (Sandin *et al.* 2020). However, no significant gender differences were found for levels of anxiety stress and depression (Rodriguez – Hidalgo *et al.* 2020). Though, in a recent study, a significant level of distress was observed among

medical students in Japan, who were subjected to home quarantine restrictions, greater distress was associated with reduced self-esteem and enhanced self-efficacy (Arima *et al.* 2020). In addition, more than 20% of medical students who had been quarantined in China reported moderate or severe levels of depressive mood (23.3%), anxiety (41.9%) and stress(20.9%) (Du J *et al.* 2020). Among medical students in UK, considerable proportions have experienced presenteeism (40%) and reported anxiety (37.2%) and depression (46.5%) that affect life satisfaction (Van Der *et al.* 2020). Depressive mood, anxiety and intension of school dropout were observed in 11.9, 18.5 and 38.3% respectively in South Korean medical students (Yun *et al.* 2021). These tendencies were more prominent among junior medical students. In terms of mental health impact of epidemics, Health Care Workers (HCWs) represent a particularly vulnerable group due to high risk of infection, increased work stress and fear of spreading infection to their families. Data from a survey of 1257 HCWs who assisted patients in COVID-19 wards and in second- and third-line wards showed high percentage of depression (50%) anxiety (44.6%) insomnia (34%) and distress (71.5%) (Lai *et al.* 2020). Also, a constant fear of contagion leads to obsessive thoughts (Brooks *et al.* 2020) increased the progressive closure of the person and reducing social relationship. In another survey conducted in Italy (Rossi *et al.* 2020) during the pandemic, confirmed a high score of mental health issues, particularly among young women and front line workers. Furthermore, Spoorthy *et al.* (2020) conducted a review on the gendered impact of COVID-19; found that 68.7 – 85.5% of medical staff is composed of women, (mean age ranged between 26-40 years). Also, womens are more likely to be affected by anxiety, depression and stress (Lai *et al.* 2020). Medical Staff at younger age (<30 years) reports higher self-rated depression scores and more concern about infecting their families than those of older age. Staff >50 years of age reported increased stress due to patients deaths, the prolonged work hours, and the lack of personal protective equipment. Cai *et al.* (2020) also found that nurses felt more nervous compared to doctors.

A lot of documentation in random and small population of the world has been available in literature but limited studies have been conducted in India, leading to limited evidence in the literature. Among all Asian countries, India has the largest no. of confirmed cases of COVID-19 till the end of 2020 (Worldometer 2020) and this severe outbreak has affected the mental health of Indians (Verma and Mishra 2020), A report on the psychological impact of COVID- 19 during lock down among Indians revealed nearly three-fourth perceived moderated levels of stress and about one-fourth reported feelings of pessimism and hopelessness (Grover *et al.* 2020). Adverse effect of pandemic on lifestyle behaviour were also observed due to changes in dietary habits, stress, disturbances in sleep pattern and decline in the level of physical activity among Indian population. Prevalence of any kind of mental stress particularly levels of anxiety were found to be at highest (Rawat *et al.* 2021).

## CONCLUSION

As stated earlier, COVID-19 pandemic led to a prolonged exposure to stress. It is a natural feeling of not able to cope with specific demands and events. The prolonged stress could involve anxiety, depression and the inability to manage traumatic and negative emotions. Anxiety is a feeling of worry, unease or nervousness that varies from mild to severe condition caused by excessive exposure to stress involve relationship problems, family issues or difficulty at work. In extreme cases, complex relationship between fear, stress and anxiety can play in the development of depression resulting sadness and lack of interest in life.

During COVID-19 besides severe health complications in patients, a wide range of psychological disor-

ders have also been observed at individual, community, national and international level. People are more likely experience fear of getting sick, dying, feeling helpless, and facing social and financial issues during lock-down period resulting severe mental stress. As far as psychological and social impacts are concerned, patients, students, researchers and healthcare professionals reported high to moderate level of anxiety.

Evidences suggests that people who are kept in isolation and quarantine experience significant levels of fear, anxiety, anger, confusion and stress. The fear of cross-infection to their family and friends may deteriorate their psychological well-being. For students during lock-down with the closure of Universities and Colleges, attending on-line classes, failing in understanding the topic clearly, unavailability of proper network and data, disrupt in electric supply, as well as restrictions in physical and social interaction with friends, teachers and relatives resulting stress, anxiety and depression. While COVID-19 is anxiety provoking for most vulnerable group Healthcare professionals due to its rapid spread rate in population, lack of specific medical treatment, facing exposure with patients though with proper precaution, experiencing more upsetting events and feeling of helplessness in controlling the worst condition caused by pandemic.

In current scenario the major factor responsible for provoking psychological illness is Media/Internet. Most of the news published on COVID-19 are distressing, occasionally associated with rumours leads to rise in anxiety level. Flooding misinformation and fabricated information leads to depression, when a person is constantly exposed to news for COVID -19. To avoid the worst situation, one should restrict the use of electronic media and explore it for positive purpose i.e., entertainment only.

In view of these serious circumstances, a careful evaluation of the potential benefits of the quarantine is needed, by providing fast broadband, net services, psychological talks, maintaining healthy social ties with family and friends might be helpful. By participating in co-curricular and creative activities like singing, writing, dancing, playing music, painting and gardening are also helpful in coping with anxiety. To prevent the pandemic from spreading, rules imposed by Government should be followed.

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