

Review Article

Psychological effects of COVID-19 pandemic on Indian population: a review

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ABSTRACT

The coronavirus disease 2019 (COVID-19) pandemic has changed the lives of millions of people and led to a major health crisis across the globe. According to various surveys and observations, people who were suffering from pre-existing mental issues, neurological defects, psychological disorders, were the more prone to COVID-19 infection. Based on this scenario, people from upper classes to lower classes, from infants to senior citizens, big business persons to small entrepreneurs, government agents to private-sector employees; all kinds of people faced various challenges, which weakened their strength of living. These situations snatched the power of normal living life and negativity suppressed globally. Break down of the education system, devastating socio-economic conditions, helpless healthcare system for uncertainty etc. were reasons for extreme level imbalanced psychological issues. Inside the crematorium, the fume of the burning fire of dead loved ones made people distressed in a daily manner. Some people gave up and wanted to end their lives, while most did suicidal attempts. Some people found themselves as jobless. Suddenly, People discovered themselves, fighting with hunger pain. It was the toughest war; struggling for existence, taking up arms against the unseen. The present study explored the psychological impacts of COVID-19 pandemic. The target of this study is to assess the effects of lockdown on the Indian citizen with an objective to appraise the manifestation of anxiety, mental trauma and depressive issues.

Keywords: COVID-19, Pandemic, India, Education, Healthcare, Psychological impacts

INTRODUCTION

In the pages of history, 2020 will be considered as the most rigorous year due to the sudden outbreak of coronavirus disease 2019 (COVID-19) virus in the city of Wuhan, China, that later became a global pandemic. Substantial changes have been witnessed for the pandemic crisis that changed the way of pursuing life, way of conducting business as well as total habitant

systems.¹ From the young to old, lower class to upper class, all kind of people suffered a lot. Mood swings, pessimism, sleeplessness, feeling of helplessness, hopeless, guilty, anxiety, depression, appetite etc. dominated over large societies.² Quarantines effected in many people's livelihood, usual activities, routines and it harmed them with use of alcohol, drugs, high peak loneliness, self-harm, suicidal behaviour as well.³ The whole world including India went through severe strict

lockdowns, janta curfew. The visible impact of sudden complete lockdown, restriction in travel were migrant crisis, socioeconomic misbalance.⁴ A large changes observed in entire education system (pre- primary to upper universities). Economic backbones collapsed. From the CEO of a big company to roadside vendors suffered in different aspects. All went through the insane, weird feelings including children, youngsters and old people.⁵

EFFECTS OF ONLINE EDUCATION ON MENTAL AND PHYSICAL HEALTH OF STUDENTS

In comparison, the pre and post-COVID situations differ a lot. Life as we know changed and this change became a very new constant. Mental health has been changed horribly. Drastically, being disconnected from the classroom environment children have lost their interest in the continuation of classes as per the survey, it needs strong self-motivation and time management skills during e-learning.⁶ Due to long time monotony, these were absent in students' mentality. This was presented in a report on school education titled 'Locked Out' jointly prepared by nearly 100 volunteers in 15 states and Union Territories (UTs) including Odisha, Assam, Bihar, Chandigarh, Delhi, Gujrat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal. This survey concentrates on relatively underprivileged, poverty-stricken areas like hamlets, and ghettos. The children of these areas normally attend Government schools. As per catastrophic consequences of 1.5 years' school closure in rural areas, only 8 per cent of kids attended online regularly and 37 per cent did nothing and even if they forgot all known things. Globally, from estimation, we came to know that at about 83% of students tested the thrashed psychological sickness and 26% were out of access to psychological health support.⁷ Table 1 covers the impact of Covid-19 on different sects of education and teaching faculties, the results and the performances.

IMPACT OF COVID-19 ON THE MENTAL HEALTH OF FRONTLINE WORKERS

Due to the COVID-19 pandemic, there were no clearly defined treatment protocols with uncertain outcomes. To save the entire nation, frontline workers played a heroic role without thinking about themselves and their beloved families. Frontline workers including all health care professionals, police, traffic police, D-class servicemen, volunteers, ambulance drivers were the masters behind the curtains. They suffered from extreme depression-like worries of risk of infection to self and family, long working hours, adequacy of protection, being in quarantine, separation from family long time etc. leads to psychological distress. Further, these conditions took away towards persistent illness. As there is a very low resource setting in India, different plans of action had been waged such as lockdown, the diminution of regular outpatient services, delaying of the elective surgeries, rotational duty shifting in phase soon. Different

biological, psychological and environmental factors became the risk factors for mental health disorders of HCW (Health Care Worker).¹² Biological factors like having a little child or sick elder in the family, who need additional care from the responsible person, who is delivering duty in COVID-19 wards. Psychological factors such as anxious-avoidant personality traits, fear of inspection and detached coping mechanisms were at high risk including higher emotional fatigue, tightness, pain and PTSD. Socioeconomics factors belong to lacking exact communication with higher authorities, rapid irregular guideline changing regarding infection controlling measures, sense of uncontrollability over the uncertain situation. It has known from a study report of Wuhan (China) that 87.55% of HCW has been infected. The HCWs, who was working in the high possibility area (screening outpatient department (OPD), inpatient and ICUs), were in the danger zone of subjection to infections. Continuous social distance from family members affected in lack of emotional support and added to super emotional stress. Fear, apprehension, helplessness had spread among frontline workers because of mortality of colleagues daily, insufficiency of PPEs (personal protective equipment). Perceived stigma among HCWs played the role of major mediator for psychiatric problems during pandemics. Pandemic quickly turned into 'pandemic' in the community due to misinformation through crowd behaviour, social media.¹³ Figure 1 shows the percent of people affected by different diseases like diabetes, hypertension, cardiovascular diseases etc. during pandemic and were on the state of survival while the figure 2 shows the percentage of the people effected during the pandemic situation. Figure 3 chart is showing the percentage of people having anxiety and disorder during the months of June and July in the year 2020 and 2021.

NEUROGENIC DISEASE AND ITS PATHOPHYSIOLOGY

It has been reported that within 6 months after confirmed COVID-19 diagnosis, there is an outbreak of 14 neurological and psychiatric outcomes occurred these are Parkinsonism, ischaemic stroke, intracranial haemorrhage, Guillain-Barre, nerve, nerve-root and plexus disorders, myoneural junction, muscle disease, dementia, psychotic, mood, anxiety disorder, insomnia, encephalitis.¹⁴ It is observed by Autopsy that SARS-CoV-2 infects neurons. As a result, transposes in the brain parenchyma, vessels effects on blood-brain and blood-cerebrospinal fluid behaviour, which causes inflammation in neuron, supportive cells and brain vasculature that correlates with cognitive-behavioural changes. Post-COVID brain fog in critical patients with COVID-19 that evolved from mechanisms like deconditioning or PTSD. The reason for mild COVID-19 was observed in many patients as dysautonomia.¹⁵ There are two major anatomical infection routes, which are responsible for entering SARS-CoV-2.

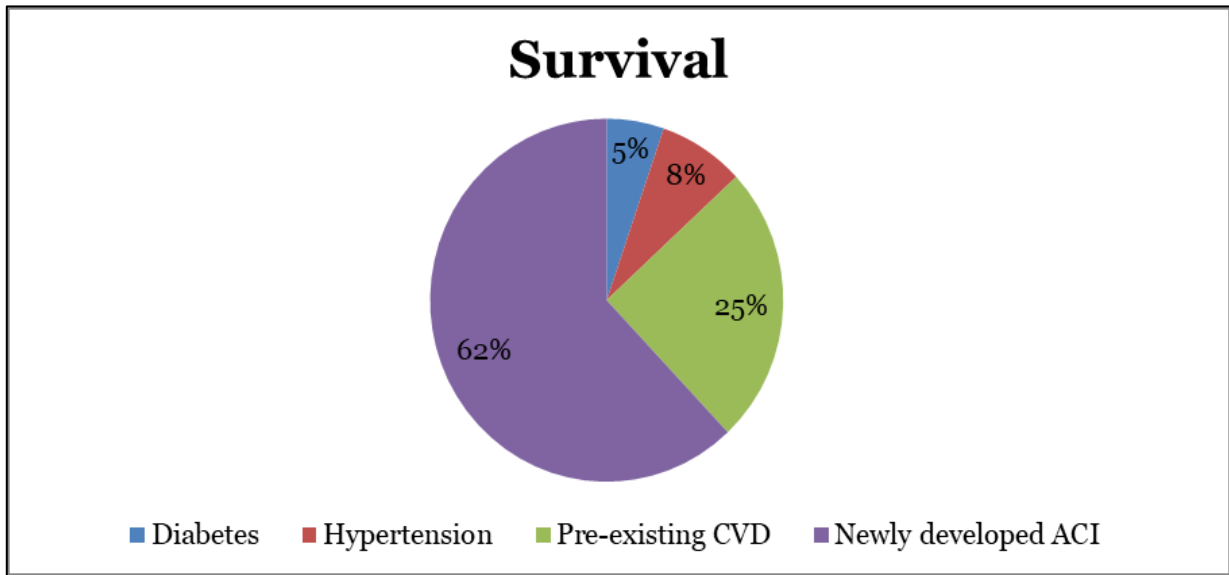


Figure 1: Percent of people affected by different diseases during pandemic and were on the state of severity.

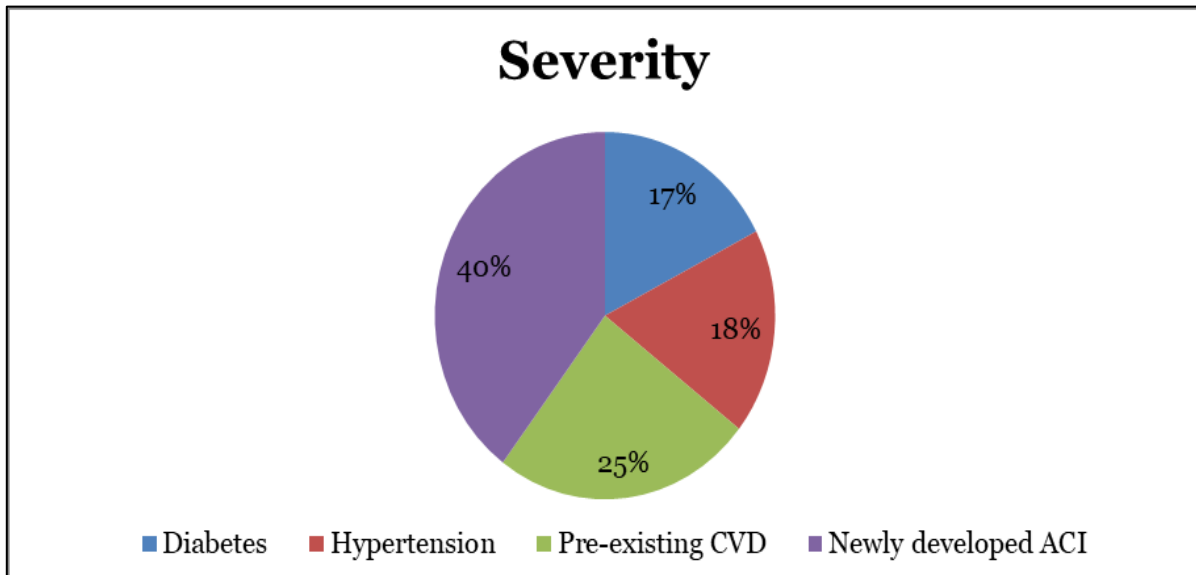


Figure 2: Percent of people affected by different diseases during pandemic and were on the state of survival.

Along the path, the virus enters into the CNS, a neural pathway through the PNS and next to a fluid body pathway along with blood, lymph and CSF. This viral infection can destroy the lymphatic drainage system of the brain.¹⁶ In some more extensive studies conducted in France and China, about 36 per cent of patients possessed neurological symptoms. Neurological disorders are frequently chronic, long-term conditions.¹⁷ Children suffered from multisystem inflammatory syndrome (MIS) including neurological symptoms like headache, altered behaviour, generalized weakness and encephalopathy.¹⁸

IMPACT OVER ECONOMIC SYSTEM

Pandemic results in various behavioural and psychological problems like gender-based violence,

Alcohol dependency, anxiety, stress etc. The covid-19 outbreak has introduced additional stress and further disturbed the mental fitness of normal people, making them worse for psychological disorders. Since agriculture is the pillar of Population and an important factor, the influence is such as to be less on both cases of primary agriculture production as well as usage of agro-input.¹⁹ As per RBI and the finance minister's announcement, the employees in the agricultural field was about to be helped. However, due to continuous lockdown, there has been a breakdown of supply chains' access to the market for the sale of agricultural products, affecting the income of rural households.²⁰ In that tough situation, no official data on hunger was found in the country.

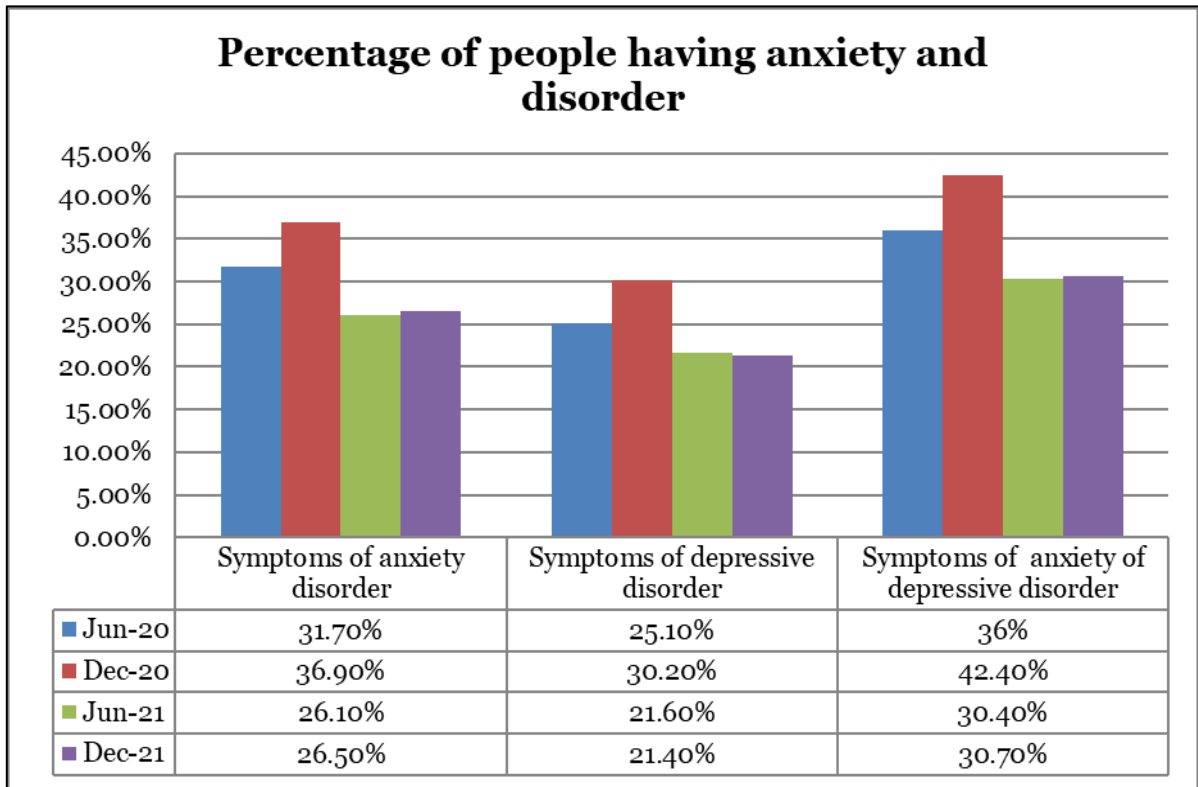


Figure 3: Percentage of people having anxiety and disorder during the months of June and July in the year 2020 and 2021.

Table 1: Impact of Covid-19 on different sects of Education and Teaching faculties.

Children	From the very young age, children have faced stress and anxiety. Lack of physical activities, eyesight problems, scarcity of vitamin D, calcium deficiency, exhaustion by online platforms tend them towards frustration. Overtime sense of isolation, digital connection breakdowns mattered too. During online assessment cheating prevention have been most complicated. ^{8,9}
Poor meritorious	Poor meritorious students lagged behind due to absence of digital platform and media. The well-focussed students from remote areas have been deviated and failed to continue their studies due to long-term closure of schools, colleges. Issues like unstable network, insufficient hardware were the obstacles of learning. ⁸
Teaching Faculty	It was a great challenge for teaching faculty members because of lacking of online teaching experience. There was not enough time to prepare themselves regarding new technology. ⁸
College students	Many college students were suffering from uneasiness due to financial headache and serious worry, phobia of the uncertainty, the academic year loss. ¹⁰
Overall students' problem	On the other-hand, many students distracted because of more utilisation of unnecessary social media, texting, video games, television and family, which pulled their attention away from productive works. ¹¹ This was presented in a report on school education titled 'Locked Out' jointly prepared by nearly 100 volunteers in 15 states and Union Territories (UTs) including Odisha, Assam, Bihar, Chandigarh, Delhi, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal. ⁷ Moreover, all students didn't get the study environments at home

After that, it was observed that the ruinous impact on income, employment and food security as per media reports and studies. We knew from the report of newspaper, which stated the work of some volunteers. The volunteers' documented approximately 300 deaths in the lockdown period, because of starvation and financial distress were totally non-COVID. In 2020, the specific

situation turned out the transport system as lame that affected major airlines, which faced huge losses including cutting out the salaries of employees, lame of the employee, sending them to leave without paying. There was the suspension of all domestic and international air travel in central Asia. The spreading of sudden COVID-19 unfastens all cabin crews, their families and passengers to specific high mental stressors like excessive

workload because of intensive cargo operation, emergency action or on account of crisis conditions in-flight system.²¹ It changed alliance and group climate because of offensive measures. Occupation insecurity, loss of earning and prospective loss of employment. This pressure led to psychological strains like anxiety, uneasiness, and existential phobias that pessimistically over crews' that tended toward the unsafety of their license. From a tourism industry perspective, there has always been assured and formative familiarity between tourism and mental health outcomes. Moreover, it revealed from a systemic review that the global convenience of travelling, such as prolonging quality of life, prospering physical health, and comforting stress.²² Telecom supplied the basic requirements of general people, health care providers and patients with COVID-19, especially during quarantine. It enabled patients in real-time by connecting with health care providers for consultation on their health complications. Lockdown in India had triggered a widespread economic shock due to increased demand for internet and video conferencing services but supply chain disruption, price freezes and reductions in handset sales had strongly affected the Telecom industry especially the smartphone market witnessing substantial drop in the shipping of new devices. Overall, Telecom operators risk a decline of 3.4% in revenue in 2020. In major cities there was shut down due to this subscriber Edison is lower. In addition, their high anticipation of some floor tariffs coming from the government and given where the macroeconomic condition would be vomit could be little reluctant to push on higher tariff prices for subscribers. However, at the same time whole of India is working from home and the data consumption will see some good improvement Telecom had a minimal negative impact because of COVID-19. In a pandemic, Telecom operators help in connecting while keeping businesses and educational institutions logged on. Due to telecommunication, people spend their time using tablets and smartphones.²³ This rises in dependability on smart devices and screens has been reported to enhance stress.²⁴ The often use of computers and screens is united with an excess of stress-related symptoms. Pharmacists were absolutely the frontline HCW's working assiduously, who provided much-required services during the pandemic with the doctor, nurses and other staff. Chemists played a vital role in managing life-saving medications for COVID-19 patients.²⁵ They joined inpatient rounds and engaged themselves in infectious disease control. In that situation, people received support and benefit from the persons, who are experts in medical knowledge. In these circumstances, the real economic backbone broke down. Corrupt people have continued the action of misappropriation as they have been spending money over the healthcare system was undone to fraud. Several studies describe the condition of mental health sequels associated with symptoms and COVID-19 in HCW's psychiatric symptoms and disorders. The SAR-COV-2 can be linked with psychological symptoms, which are not important to increase the stage of psychological

disorder and post-traumatic disorder. Most stress symptoms remain for a short period s and they became normal within a few days.^{26,27}

CONCLUSION

The SARS-COVID has made marked effect on mental health of students in all age groups. The situation turned into that level of the fight- environment; mind-set of human beings vs. invisible virus. The vibe made every human creature helpless and hopeless. People of a developing country like India coped with this situation horribly. Prevention of outbreaks became tougher because most of the people in India are used to living with dense habitants' systems. Active efforts are essentially needed to support the mental health for well-being of students. In HCW's, the people may surely turn to chemist to get non-COVID medicines. Medicinal expertise is a must and essential need for care of mental health. It must be looked into focus that professional should be equipped for both current situation and future needs for wellbeing of those people struggling with mental health in on-going pandemic and any future causalities.

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