

## COVID-19 and Mental Health

### Abstract

The pandemic caused by COVID-19 has effected many people worldwide causing emotional, financial and psychosocial distress. During the pandemic many articles have been done on the clinical aspect of the virus but only a limited amount has been done on the mental effects caused by the virus. We have looked into various articles and reports and have given our views as to the effect that COVID-19 has on Mental Health.

### Introduction

COVID-19 made its first appearance in the city of Wuhan, China in December 2019. This disease was caused by Severe Acute Respiratory Syndrome Coronavirus. According to the World Health Organisation (WHO), who declared that the virus is a global public health crisis, within 2 weeks it spread to 114 countries with 118,000 recorded cases and 4291 deaths. This pandemic had severe repercussions to the health system, economies, societies and mental health. A recent study suggests that COVID-19 can impact cognitive function in those, a year or more after they have contracted the virus. Enrolment in a study of more than 140,000 participants and assessing the cognitive and memory abilities of recovering individuals from COVID-19 compared to those who had not been infected is being done. [1]

### Covid-19 on mental health

Those at greatest risk prone for Covid 19 (including the elderly, people with compromised immune function) must be given special attention. Individuals will have negative psychosocial outcomes with pre-existing medical, psychiatric, or substance use problems. Prevention efforts such as screening for mental health problems, psycho education, and psychosocial support should focus on these and other groups at risk for adverse psychosocial outcomes. Post pandemic, health care workers, especially

### Short Communication

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doctors, nursing staff, hospital management staff, paramedics and emergency health care workers who had suffered the Covid 19 infection, in a short span or a longer span involving hospital admissions, must be carefully checked for loss of cognitive impairments and reports must be made at a national level considering their fitness to work in the health sector. During the pandemic strict protocols were created by the WHO which was implemented by the national Government authorities.

Those individuals who had symptoms of COVID-19 had to be tested for the disease via a nasopharyngeal swab. If the result came back as positive for the disease and they were clinically well, they would have to isolate at home for a period of 7-14 days. If they were clinically unstable they would require admission into an isolation ward in the Hospital. Depending on their oxygen requirement, they would either be admitted to an Intensive Care Unit (ICU) or an isolation ward with nasal oxygen facilities. Those

who were admitted to hospital experienced a wide range of problems with cognitive impairment, mostly effecting attention, memory and executive function [2]. They also experienced headaches, seizures, sleep problems, tingling and paralysis of the nerves and mental disorders (Anxiety, depression). The pandemic triggered 25% increase in prevalence of anxiety and depression worldwide [3].

### **Brain fog**

Covid 19 patients, admitted in the hospital and even those who isolated themselves at home show forgetfulness, a sudden blankness and confusion, lasting for a few seconds to minutes. A sudden mist appears and one finds difficulty in coining the right word. its importance lies in Paramedics and Emergency Medical Services who are Covid survivors and suffer sudden brain fog appearing while rescuing a patient, medical doctors who had suffered from Covid, in active duty asking the same question repeatedly to a patient are a few examples from the health delivery sector. Deficit in maintaining attention is one of the main symptoms and in extreme cases may even cause delirium. Aerobic Exercises and Healthy food habit may relieve the symptoms slowly. [4]

### **Computer tomography scan (CT scan)**

Changes in the hippocampal area of the brain, which may lead to impaired memory and dysregulation of mood, were noted on Contrasted Computer-Tomography scans of the brain. These scans also revealed multiple small infarcts in the olfactory area responsible for smell. Damage to this area would thus explain the common symptom of anosmia (loss of smell), and even a small number of such infarcts can predispose to a cerebral vascular accident. On autopsy of patients who died of COVID-19, megakaryocytes (precursors of platelets) were found in the brain, yet again explaining the prothrombotic nature of the disease and its causal relationship with patients developing stroke during and after the disease.

A review of the symptoms of post-COVID-19 found that the mildest patients (those with minimal symptomatology and who were clinically stable) showed improvement in microscopic changes in the brain after 6 months, while ICU patients were more likely prone to long-term sequel. Due to the diversity and specificity of imaging developments that can reveal the pathogenesis of post-COVID-19 at

the micro-level, this report may alert neurosurgeons and radiologists to possible neurological disorders in post-COVID-19 patients unique from common neurological encephalopathy. This report endeavours to provide a certain therapeutic reference for doctors' diagnosis and treatment and patients' prognosis [5].

### **Long term cognitive effects of Covid-19 on mental health**

Cognitive processing speed at a slower rate and memory lapses happening months after Covid affliction points towards a need of a Computer Tomography Scan which may show diffuse white mater hypodensities / hyperintensities. This is especially important to be noted among Physicians and Paramedics where sudden blankness for a few seconds in their daily routine hampers the overall management of health of themselves and others.. The presence of Depression among former patients who had Covid 19 for even more than six months back, signifies long term cognitive effects on neuropsychiatric health [6,7].

Computer Tomography Scans are recommended for all in hospital patients of Covid 19 and repeated again after they have achieved a certain amount of wellness. Comparative studies over periods done by the Radiologists and Physicians can help in the prognosis of such patients who had suffered Covid 19 infection. Long Covid may cause sufferers' IQ to drop by six points, a major study suggests. Researchers in the UK found the loss for patients who said they had been suffering from Covid symptoms for more than 12 weeks compared to those who said they had never had the virus.

### **Palliative care of COVID-19 patients**

Increased anxiety, secretions and delirium during Covid 19 affliction need psychosocial care and symptomatic treatment. Underlying diseases may cause coma and long periods of ventilation. Families should be engaged during such periods and a dignified death by palliative extubation should be discussed. [8]

### **Conclusion**

Covid 19 has been shown to cause decrease human cognitive functions. More research work should be done to mark a clear connection and significant treatment may be suggested to alleviate the distressing mental symptoms.

## References

1. COVID-19 Pandemic Triggers 25% Increase in Prevalence of Anxiety and Depression Worldwide, *World Health Organisation*, March 2, (2022).
2. Nguse, Siphellele and Douglas Wassenaar. "Mental health and COVID-19 in South Africa." *SAJP* 51 (2021): 304-313.
3. Mayo-Puchoc, Nikol, Jenny Bejarano-Carranza, Rubí Paredes-Angeles and Ana Lucía Vilela-Estrada, et al. "Paper promises: Peruvian Frontline Health Workers Perspectives on Mental Health Policies during COVID-19." *HPP* 2 (2023): 3.
4. Budson, Andrew. Harvard Health Publishing, Harvard Health Blog, Harvard Medical School.
5. Andrew Budson. The Hidden Long-Term Cognitive Effects of COVID-19, Harvard Health blog March 4, (2021).
6. Ferrucci, Roberta, Michelangelo Dini, Elisabetta Groppo, and Chiara Rosci, et al. "Long-Lasting Cognitive Abnormalities after COVID-19." *Brain Sci* 11 (2021): 235.
7. Poletti, Sara, Mariagrazia Palladini, Mario Gennaro Mazza and Rebecca De Lorenzo, et al. "Long-Term Consequences of COVID-19 on Cognitive Functioning up to 6 Months after Discharge: Role of Depression and Impact on Quality of Life." *PCN* (2022): 1-10.
8. NDOH COVID-19 Guidelines Palliative Care for Patients with COVID-19
9. Mental health and COVID-19: Early Evidence of the Pandemic's Impact, scientific brief, *World Health Organization*, March 2, (2022).
10. Zhou, Hetong, Shaojia Lu, Jingkai Chen and Ning Wei, et al. "The Landscape of Cognitive Function in Recovered COVID-19 Patients." *J Psychiatr Res* 129 (2020): 98-102.

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