



Review Article

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## *A Review of the Psychological Effects of the Spread of the COVID-19 Disease on the Mental Health of the Community*

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### ABSTRACT

Infectious illness COVID-19, which was caused by a brand-new coronavirus and was identified by the World Health Organization (WHO) as COVID-19, was reported to be spreading in the Chinese city of Wuhan at the end of December 2019. Due to its rapid transmission, COVID-19 generated a worldwide health emergency in all nations in less than a few months, making its expansion unusual. There are several ways that the spread of infectious diseases has an effect on mental disorders: it may have an impact on pre-existing mental illnesses; it may result in new psychological symptoms in people due to the interaction between immunity and mental illness; and it may cause suffering for the caregivers of the affected individuals. Because COVID-19 may spread across society and stressful stimuli may be experienced by people in many sections of society, it is critical in this circumstance to preserve people's mental health. During the incremental phase of the disease's transmission, people from many walks of life—including COVID-19 patients, persons in quarantines, healthcare professionals, kids, college students, expectant women, and their families—may experience psychological symptoms of the illness. In this sense, there is compelling evidence that these individuals' mental health state predisposes them to developing symptoms of psychological disorders. Therefore, the purpose of this study is to report the prevalence of psychological symptoms in communities that were vulnerable to COVID-19's propagation and to determine the risk variables that were involved in the disruption of people's mental health during the COVID-19 pandemic.

**Key words:** Psychological effects, COVID-19, Mental health, World health organization

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### INTRODUCTION

In Wuhan, China, the first coronavirus detection occurred in December 2019. On January 30, 2020, WHO approved the outbreak of the new coronavirus and declared a public health emergency. On February 11 of the same year, it was officially named the Coronavirus disease (COVID-19) virus [1-3]. On February 4, due to the spread of the disease, a state of emergency was declared. The COVID-19 disease has been deemed a serious danger to both physical and mental health by the World Health Organization [4, 5]. This is because the disease's spread has changed families' daily routines and regular way of life. There is a link between mental discomfort, the signs and symptoms of mental illness, and the extensive spread of infectious illnesses like COVID-19 [6, 7]. According to research, illnesses like respiratory conditions, which result in major health issues and a decline in patients' quality of life, can create worry in patients [8, 9]. The majority of studies concentrate on patients' anxiety; however, during an epidemic of a disease like Corona, dread of the sickness and fear of mortality, together with

the disarray of everyday routines, induce healthy individuals to feel nervous about the disease [10, 11]. The threat to people's mental health in society has been posed by a variety of conditions, including fear of death and disease, disruption of daily routines, the spread of false information and rumors, travel bans or restrictions, a decline in social interactions, employment and financial difficulties, and dozens of other effects [12]. Numerous symptoms, all the way up to significant clinical diseases, might be brought on by these circumstances. Similar diseases have been linked to increased feelings of isolation, less social support, a shorter life expectancy [13, 14], feelings of dread and worry about stress and anxiety, obsessive thoughts and behaviors connected to the illness [15, 16], and even post-traumatic stress symptoms [17, 18].

The World Health Organization has issued guidelines for managing this problem from a medical and psychological perspective. In this article, with a wide review of related articles, some psychological consequences and solutions to control and reduce them have been discussed.

#### *Mental health of people with COVID-19*

Due to its incredibly quick transmission, the COVID-19 illness has the unusual characteristic of having infected every nation on Earth in less than a few months [19]. The world's population of those who have this disease and the number of deaths it causes are both rapidly growing at the moment [20]. Numerous psychological disorders, such as anxiety, fear, depression, emotional changes, insomnia, and post-traumatic stress disorder (PTSD), have been reported with a high prevalence of these patients when examining the findings of numerous studies conducted on patients with COVID-19 in China during the spread of the disease [21, 22]. One of the most significant elements that might negatively impact a person's mental health who has been exposed to this virus is its eventual death [23, 24]. Patients with COVID-19 have a poor psychological tolerance, and given the prevalence of the condition globally, these individuals are more vulnerable to developing psychological disorders such as anxiety, dread, sadness, and negative thoughts [25]. Post-stress disorder is one of the most significant psychological conditions that can impair the mental health of COVID-19 patients. It resulted from a mishap [24]. Invading memories, avoidance behaviors, anger, and emotional numbness are only a few of the long-term effects of this psychiatric condition if it is not addressed in sick individuals [24, 26].

Sleep disorder is one of the other problems of people suffering from COVID-19, which may occur in isolation or quarantine for these people. The findings of the study in China during the COVID-19 disease's growth in the city of Wuhan demonstrate that the sleeping bag index in these individuals significantly declines [27].

#### *Mental health of people in quarantine with COVID-19*

The mental health of people may be harmed, and some psychological disorders may manifest in those under quarantine, depending on the environmental factors and the infectious disease that is spreading [28]. Generally speaking, every study that has looked at the psychological disorders of those in quarantine has found a wide range of indicators of mental damage, including emotional disorders, depression, stress, insomnia, decreased attention, post-traumatic stress disorder, etc. [28-30]. In a study conducted on hospital personnel after a period of quarantine, people showed signs of acute stress disorder [31]. According to research findings, post-traumatic stress disorder is among the significant psychological symptoms that have been noted in a variety of people who have been placed under quarantine as a result of the influenza virus that has been spreading among hospital staff [28]. According to research findings, over 9% of people and hospital staff had severe depressive symptoms 3 years after being isolated, which is another sign of mental health issues in people and hospital staff [32]. Quarantine is thought to be the most popular and effective method for stopping the spread of the COVID-19 illness [30]. In this article, it is stated that the fear of contracting the disease or spreading it to others, a lengthy quarantine, a lack of support, a lack of access to medical care and adequate food, and, lastly, fatigue and boredom brought on by isolation and quarantine are the most stressful factors and the root causes of psychological disorders in those who are under quarantine due to the COVID-19 disease. The patient in COVID-19 quarantine may be less likely to adhere to the continuation of the treatment as a result of all the aforementioned factors, as well as the addition of some unpleasant thoughts like feeling lonely, labeling (stigmatization), denial, despair, and, in more severe cases, aggression and suicidal thoughts, which may make them consider leaving the quarantine location. Last but not least, while in quarantine, individuals lose the emotional support of their friends and family, which adds to the stress and psychological harm.

#### *Mental health of healthcare workers*

Healthcare professionals are the first to be exposed to COVID-19 since they are combating infectious illnesses and infectious diseases like COVID-19 on the front lines. Despite the fact that unprotected contact with infected patients at the start of the COVID-19 outbreak is the main cause of this high percentage of medical worker contamination, research results indicate that 8.3% of medical care workers were contaminated during the COVID-19 outbreak [33]. Based on findings from earlier research conducted during the SARS and Ebola outbreaks, healthcare personnel are at risk for developing detrimental psychological illnesses such as anxiety, dread stress, and labeling, which can have a significant negative impact on the quality of their job and services [34, 35]. In contrast, healthcare personnel are required to wear bulky protective apparel and an N-95 mask, which limits their range of motion and makes it more difficult for them to carry out medical treatments and practices than under normal circumstances. Medical professionals are more susceptible to psychiatric illnesses due to all of these circumstances, as well as the possibility of contracting an illness and spreading it to others [36].

Healthcare professionals are more likely than others to have psychological problems and anxiety owing to being on the front lines of treating this disease, given the spread of the COVID-19 sickness around the world and the number of casualties caused by this disease [36]. The analysis of the findings from the same study also revealed that staff who have direct contact with COVID-19-infected patients had a higher anxiety index than staff who do not have direct contact with these patients [37]. Additionally, the anxiety index among medical staff in places with the disease (like Wuhan) is greater than that of medical staff in other cities. As a consequence, it appears from the findings of the research that has been provided that it is crucial to look after and preserve the mental health of medical professionals in the face of dangerous infectious disorders like COVID-19.

#### *Mental health of family members of healthcare workers*

Based on the available evidence, family members of healthcare workers, including people at risk, are related to the occurrence of psychological disorders. Acute COVID-19 circumstances are one of the variables contributing to and causing the emergence of significant psychological problems, such as stress, anxiety, and depression symptoms, in the families of healthcare professionals [38]. One of the causes of the occurrence of these psychological disorders is that family members are unable to communicate with their loved ones who are employed by hospitals and other healthcare facilities because the workers may demonstrate to their relatives their fear of the virus's spread and their intense worry about passing the illness on to their relatives [39]. On the other hand, family members of healthcare professionals may also have comparable psychological issues linked to the worry that their loved ones may infect them with the COVID-19 virus while they are working in healthcare facilities [38].

#### *Mental health of students*

The physical and mental health of children and adolescents is impacted by the quarantine of homes and schools as a result of the spread of infectious and contagious illnesses like COVID-19 [40, 41]. According to research, children and teens engage in less physical activity over weekends and summer breaks, which also affects their sleep patterns and their ability to maintain a healthy diet [42]. When youngsters are kept inside their homes and do not participate in outside activities, this situation is exacerbated. On the other hand, the emergence of stress-inducing factors at home, such as a persistent fear of contracting COVID-19, unpleasant thoughts and boredom, a lack of communication with classmates, friends, and teachers, a lack of a suitable home environment, and occasionally parental financial and economic difficulties, can have a long-lasting impact on children's and adolescents' mental health [29]. It is important to keep in mind that the average post-traumatic stress index in children who are confined is four times higher than that of children who are not quarantined [43]. Acute stress disorder, adjustment disorder, and mourning are some of the more severe psychological symptoms that children who are separated or placed under quarantine as a result of the present illness conditions (COVID-19) will manifest. 30% of these kids, it has been reported, exhibit PTSD symptoms [41].

#### *Mental health of pregnant mothers*

One of the things that might make pregnant women more stressed and anxious is the spread of COVID-19. The results of the research indicate that an increase in concern and stress during pregnancy results in an increase in pregnancy toxicity, depression during pregnancy, an increase in nausea and vomiting during pregnancy, early birth, and low birth weight in kids. Most expectant mothers have a rise in anxiety and fear during the COVID-19 disease outbreak because of the social isolation strategy, some movement limitations, and quarantine [44]. Pregnant women's depression rose during the COVID-19 illness epidemic, according to studies done in China

[45]. Contrarily, pregnant mothers who require greater emotional support may be deprived of it as a result of limited contact with their families as a result of the limitations put in place as a result of the COVID-19 virus's spread. Also, due to the aggravation and high use of sanitary materials and Detergents increase the possibility of poisoning in these people. Even in some cases, some pregnant mothers may not go to the relevant specialist to follow up on the condition of themselves and the fetus due to the fear of contracting COVID-19. Therefore, it has been reported in cases that due to excessive worries and anxiety, some pregnant mothers demand termination of pregnancy and elective cesarean section. Finally, some pregnant mothers are worried about their children after giving birth for screening and vaccination in the conditions of the outbreak of the COVID-19 disease [44].

## CONCLUSION

The COVID-19 illness, which first appeared in China in December 2019, grew rapidly and has already infected every country in the world in less than a year [46]. There is no clear answer as to how long this global health crisis will last, and patience is required. The very rapid spread of COVID-9, which is one of this virus's most significant characteristics, as well as the percentage of deaths brought on by this disease, have presented a significant health challenge to a large number of countries worldwide, especially the developed countries. In order to preserve people's mental health by employing suitable psychotherapy techniques, it is crucial to identify the source of psychological illnesses in various people in a society whose mental health may be in danger. It is preferable to offer appropriate treatment protocols using appropriate and remote psychotherapy methods using cutting-edge tools like video conferencing, online programs, using the right apps, and the telephone in a situation where the mental health of every member of society is at risk due to the highly contagious COVID-19 virus. Research has shown that these techniques are successful in treating anxiety, depression, and PTSD. In this respect, China has created self-learning procedures in the form of films and essays for the general public as well as for particular groups such as kids, pregnant women, the elderly, those who have lost loved ones as a result of the illness epidemic, and medical professionals [47]. A number of artificial intelligence algorithms were also deployed by China to address mental crises brought on by the COVID-19 epidemic. As an illustration, the artificial intelligence algorithm tracked and analyzed the messages made to online counseling services to identify individuals who were in danger of suicide [22]. It is possible to preserve the mental health of individuals at various levels of society in the current high-risk environment where it is at risk due to the COVID-19 disease for the mental health of everyone in society. This can be done by identifying psychological disorders in those who are most vulnerable in society and by providing appropriate and targeted psychotherapy programs and protocols. Since distressing stimuli may be experienced by people in many sections of society as a result of the spread of COVID-19, it is critical to preserve people's mental health in this circumstance. Therefore, in the present high-risk environment, it is essential to identify people at different levels of society who are prone to psychological diseases and whose mental health may be in danger, in order to preserve people's mental health with suitable psychological solutions and procedures.

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## REFERENCES

1. AlAssad F, Alqhtani N, Alshammery D. Implementation of teledentistry in postgraduate dental education during COVID-19 pandemic in Saudi Arabia. *Ann Dent Spec.* 2021;9:20-6.
2. Khan TM, Tahir H, Salman M, Ul Mustafa Z, Raza MH, Asif N, et al. General anxiety predictors among frontline warriors of COVID: cross-sectional study among nursing staff in Punjab, Pakistan. *Arch Pharm Pract.* 2021;12(2):40-4.
3. Moezzi M, Abarian A, Rafati Navaii A, Baghaei S, Ataee Rad S, Pooromidi S, et al. Assessment of the Relationship between ABO Blood Group and Susceptibility, Severity, and Mortality Rates in COVID-19. *Entomol Appl Sci Lett.* 2021;8(2):32-6.

4. Fischhoff B. Speaking of Psychology: Coronavirus Anxiety. 2020. Available from: <https://www.apa.org/research/action/speaking-of-psychology/coronavirus-anxiety>.
5. Alhussain BS, Alhazmi AK, Almotairi MA, Algaber NA, Razzaz RA, Alwaal ZS. COVID-19 awareness, its relation with periodontal diseases, and practice among dental professionals in Riyadh, Saudi Arabia. *Ann Dent Spec.* 2022;10(3):39-47.
6. Adhikari SP, Meng S, Wu YJ, Mao YP, Ye RX, Wang QZ, et al. Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: a scoping review. *Infect Dis Poverty.* 2020;9(1):1-2.
7. Islahudin F, Ariffin NM, Aziz SA. COVID-19 One Year on Community Response to the New Norms among Malaysians. *Arch Pharm Pract.* 2021;12(4):69-75.
8. Tian S, Hu W, Niu L, Liu H, Xu H, Xiao SY. Pulmonary pathology of early-phase 2019 novel coronavirus (COVID-19) pneumonia in two patients with lung cancer. *J Thorac Oncol.* 2020;15(5):700-4.
9. El-Gamal F, Najm F, Najm N, Aljeddawi J. Visual Display Terminals Health Impact During COVID 19 Pandemic on the Population in Jeddah, Saudi Arabia. *Entomol Appl Sci Lett.* 2021;8(2):91-9.
10. Afzali M, Hajizadeh Koli S, Aber P, Ghasemi N. Prediction of post-traumatic growth based on psychological well-being and mindfulness during Coronavirus conditions among female nurses. *J Appl Fam Ther.* 2022;2(9):162-75.
11. Mathew ST, EIMansy I, Khan Z, Mshaly A, Shacfe S, Alenezzy N. Knowledge of safety precautions and emergency management during COVID pandemic among dentists in Saudi Arabia: cross-sectional study. *Ann Dent Spec.* 2022;10(1):69-77.
12. Pham TV, Huynh SV, Dang-Thi N, Tran-Chi V. Fear of COVID-19 among Vietnamese Undergraduates and Predictors of their Fear. *J Biochem Technol.* 2021;12(3):27-32. doi:10.51847/iSWa5cqOkF
13. Mahmoudi F, Abdian Z, Maali Mehrabani E, Sarikhani M. Prediction of Coronavirus anxiety based on the mental strength of girls: With the mediating role of self-criticism. *J Appl Fam Ther.* 2022;2(Covid-19 articles collection):176-89.
14. Low LF, Islahudin F, Saffian SM. Development of Written Counseling Tool for Subcutaneous Anticoagulant Use in COVID-19 Patients. *Arch Pharm Pract.* 2023;14(2).
15. Huang Y, Zhao N. Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. *Psychiatry Res.* 2020;288:112954.
16. Agrawal D, Agrawal N, Sarangdhar S, Kumari V, Narain N, Lader N, et al. Role of altered fractionation in radiation therapy with or without chemotherapy in management of carcinoma cervix: Time to revisit in the current COVID-19 pandemic. *Clin Cancer Investig J.* 2021;10(2):53-9.
17. Shanafelt T, Ripp J, Trockel M. Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic. *Jama.* 2020;323(21):2133-4.
18. Pathak A, Gupta A, Rathore A, Sud R, Swamy SS, Pandaya T, et al. Immunotherapy during COVID-19 pandemic: An experience at a tertiary care center in India. *Clin Cancer Investig J.* 2021;10(1):22-8.
19. Zhu H, Wei L, Niu P. The novel coronavirus outbreak in Wuhan, China. *Glob health res policy.* 2020;5:1-3.
20. Remuzzi A, Remuzzi G. COVID-19 and Italy: what next? *Lancet (London, England).* 2020;395(10231):1225-8.
21. Yang L, Wu D, Hou Y, Wang X, Dai N, Wang G, et al. Analysis of psychological state and clinical psychological intervention model of patients with COVID-19. *medRxiv.* 2020:2020.
22. Liu S, Yang L, Zhang C, Xiang YT, Liu Z, Hu S, et al. Online mental health services in China during the COVID-19 outbreak. *Lancet Psychiatry.* 2020;7(4):e17-e8.
23. Xiang YT, Yang Y, Li W, Zhang L, Zhang Q, Cheung T, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *Lancet Psychiatry.* 2020;7(3):228-9.
24. Bo HX, Li W. Posttraumatic stress symptoms and attitude toward crisis mental health services among clinically stable patients with COVID-19 in China. *Psychol Med.* 2020:1-7.
25. Yao H, Chen JH, Xu YF. Patients with mental health disorders in the COVID-19 epidemic. *Lancet Psychiatry.* 2020;7(4):e21.
26. Sun L, Sun Z, Wu L, Zhu Z, Zhang F, Shang Z, et al. Prevalence and Risk Factors of Acute Posttraumatic Stress Symptoms during the COVID-19 Outbreak in Wuhan, China. *medRxiv.* 2020;10(2020.03):06-20032425.

27. Zhang F, Shang Z, Ma H, Jia Y, Sun L, Guo X, et al. High risk of infection caused posttraumatic stress symptoms in individuals with poor sleep quality: A study on influence of coronavirus disease (COVID-19) in China. medRxiv. 2020:2020-03.
28. Wang Y, Xu B, Zhao G, Cao R, He X, Fu S. Is quarantine related to immediate negative psychological consequences during the 2009 H1N1 epidemic? Gen Hosp Psychiatry. 2011;33(1):75-7.
29. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet. 2020;395(10227):912-20.
30. Rubin GJ, Wessely S. The psychological effects of quarantining a city. BMJ. 2020;368.
31. Bai Y, Lin CC, Lin CY, Chen JY, Chue CM, Chou P. Survey of stress reactions among health care workers involved with the SARS outbreak. Psychiatr Serv. 2004;55(9):1055-7.
32. Liu X, Kakade M, Fuller CJ, Fan B, Fang Y, Kong J, et al. Depression after exposure to stressful events: lessons learned from the severe acute respiratory syndrome epidemic. Compr Psychiatry. 2012;53(1):15-23.
33. Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention. Jama. 2020;323(13):1239-42.
34. Li L, Wan C, Ding R, Liu Y, Chen J, Wu Z, et al. Mental distress among Liberian medical staff working at the China Ebola Treatment Unit: a cross sectional study. Health Qual Life Outcomes. 2015;13(1):156.
35. Wu P, Fang Y, Guan Z, Fan B, Kong J, Yao Z, et al. The psychological impact of the SARS epidemic on hospital employees in China: exposure, risk perception, and altruistic acceptance of risk. Can J Psychiatry. 2009;54(5):302-11.
36. Liu CY, Yang YZ, Zhang XM, Xu X, Dou QL, Zhang WW, et al. The prevalence and influencing factors in anxiety in medical workers fighting COVID-19 in China: a cross-sectional survey. Epidemiol Infect. 2020;148.
37. Fritea L, Sipponen M, Antonescu A, Miere F, Chirla R, Vesa C, et al. Relationship Between Pre-Existing Conditions in Covid-19 Patients and Inflammation. Pharmacophore. 2022;13(3):41-8.
38. Ying Y, Ruan L, Kong F, Zhu B, Ji Y, Lou Z. Mental health status among family members of health care workers in Ningbo, China, during the coronavirus disease 2019 (COVID-19) outbreak: a cross-sectional study. BMC Psychiatry. 2020;20:1-0.
39. Guo J, Liao L, Wang B, Li X, Guo L, Tong Z, et al. Psychological Effects of COVID-19 on Hospital Staff: A National Cross-Sectional Survey of China Mainland. Available at SSRN 3550050. 2020.
40. Wang G, Zhang Y, Zhao J, Zhang J, Jiang F. Mitigate the effects of home confinement on children during the COVID-19 outbreak. Lancet. 2020;395(10228):945-7.
41. Sprang G, Silman M. Posttraumatic stress disorder in parents and youth after health-related disasters. Disaster Med Public Health Prep. 2013;7(1):105-10.
42. Mason F, Farley A, Pallan M, Sitch A, Easter C, Daley AJ. Effectiveness of a brief behavioural intervention to prevent weight gain over the Christmas holiday period: randomized controlled trial. BMJ. 2018;363.
43. Smirnova EA, Stolyarova AN, Surnina KS, Denenberg YM, Dikova TV. Impact of the COVID-19 pandemic on the development of digital technologies in academic education. J Adv Pharm Educ Res. 2021;11(1):207-13.
44. Fakari FR, Simbar M. Coronavirus Pandemic and Worries during Pregnancy; a Letter to Editor. Arch Acad Emerg Med. 2020;8(1):21.
45. Wu YT, Zhang C, Liu H, Duan CC, Li C, Fan JX, et al. Perinatal Depression of Women Along with 2019 Novel Coronavirus Breakout in China. Am J Obstet Gynecol. 2020;223(2):240.e1–240.e9.
46. Farnoosh G, Alishiri G, Hosseini Zijoud SR, Dorostkar R, Jalali Farahani A. Understanding the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Coronavirus Disease (COVID-19) Based on Available Evidence - A Narrative Review. J Mil Med. 2020;22(1):1-11.
47. Li W, Yang Y, Liu ZH, Zhao YJ, Zhang Q, Zhang L, et al. Progression of Mental Health Services during the COVID-19 Outbreak in China. Int J Biol Sci. 2020;16(10):1732.