

Covid-19: Psychological Impact of a pandemic disease

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ABSTRACT

The novel coronavirus (COVID-19) outbreak originated in China and entered the whole world and was proclaimed a pandemic by the World Health Organization (WHO). The COVID-19 raises problems for the entire human race in all facets of existence, including mental wellbeing. Older adults may become more nervous, frustrated, depressed, irritated, and withdrawn during the epidemic or when in quarantine, particularly in Isolation and those with cognitive impairment or dementia. The emotional and mental health treatment of individuals at all stages holds considerable significance in the troubled and disaster situation and needs rehabilitation, intervention, and therapeutic consideration. From social networks (families) and health-care professionals, some individuals require emotional help. This article is a Reviewed document focused on secondary data from different sources such as Journal Articles, Research Papers, and Documents from various government organizations and Commission. In this review paper, the reviewer has tried to examine the effect of COVID-19 on the individual's life as a whole.

KEYWORDS: Pandemic, Stress, COVID-19, Social Distancing, anxiety.

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Introduction

The new public health crises were threatening the world with the increase of patients suffering from novel coronavirus (SARS-CoV-2). The epicenter of this highly contagious disease was Wuhan city, China, in December 2019 ^[1]. The outbreak spread quickly across the globe over a few weeks (WHO, 2020b). ^[2] Looking at the string of countries that had led to this epidemic, on 30 January 2020, the WHO declared it a public health emergency of international significance (WHO, 2020b, 2020c).^[2,3] China reported the first COVID-19 associated death on 11 January of a 61-year-old man related to the seafood industry (WHO, 2020a). ^[4] The widespread availability of a new type of coronavirus (2019-nCoV) in Wuhan has developed a condition that is confounding and rapidly changing. ^[5,6] As of January 2020, the World Health Organization (WHO) called the epidemic an emergency of international significance for public safety. ^[1] The first death outside of China was (of a Chinese man from Wuhan) recorded in the Philippines on 2 February in the middle of the growing deaths in China. WHO declared on 11 February a name for the latest coronavirus disease: COVID-19 (WHO, 2020c). WHO announced COVID-19 on 11 March-a pandemics as about 114 countries had been hit by it (WHO, 2020c). ^[3] The World Health Organization (WHO) has verified the outbreak of novel coronavirus (2019-nCoV) as a global public health emergency of International Concern (PHEIC). ^[7] Currently, the major concern and clinical research on novel Coronavirus is inadequate or still in the primary stage Urgent need to develop safe and effective countermeasures that can be available, accessible and suitable for use in populations most in need. The outbreak is associated with exposures that surfaced in a Chinese seafood wholesale market. ^[8] The novel virus, previously called the 2019-novel coronavirus (2019-nCoV), is currently designated

as the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), WHO officially named the disease COVID-19 in February 2020 and is registered by International Committee on Taxonomy of Viruses (ICTV). ^[9] On January 30, 2020, the World Health Organisation (WHO) confirmed the 2019-nCoV outbreak as an international public health emergency as pandemic. ^[10] In November 2002, the first case of severe acute respiratory syndrome occurred in Guangdong province in Southern China with an unknown cause. Later on, it was revealed that typical pneumonia was the possible source of the coronavirus SARS-CoV with 11 death out of 63 patients. ^[11]

COVID-19 has arrived in the face of the global burden to possess the most negativity site in our minds and life. ^[12] Two more coronavirus epidemics have existed in the last twenty years: SARS-CoV and MERS-CoV. The latest virus was originally named 2019-nCoV. Two other coronaviruses infected humans since the turn of the century, triggering the 2002 SARS epidemic, and the 2012 MERS epidemic. The Middle East respiratory syndrome (MERS) is a viral respiratory disease caused by a novel coronavirus (Middle East respiratory syndrome coronavirus, or MERS-CoV) that was first identified in Saudi Arabia in 2012. ^[13-15] SARS-CoV and MERS-CoV considered being less harmful than novel COVID-19. ^[12,16] The capacity for such viruses to develop into a global pandemic appears to present a significant danger to public safety. ^[17] Members of this broad family of viruses, including camels, goats, cats, and bats, can cause respiratory, enteric, hepatic, and neurological diseases in different animal species. Data obtainable from public care organizations reports and guidelines require the clinical types of the disorder to be separated according to the intensity of the clinical data. COVID-19 can develop mild, moderate, or severe illnesses. Most

fatalities occurred in patients older than 50 years. Young kids tend to be marginally contaminated, which may act as a trigger for further transmission.^[17] All also has the opportunity to have the infection. Indian results, where a multitude of weather conditions prevail, will contribute significantly to the virus's awareness. The COVID-19 pandemic has problems with all these reasons in all facets of existence for the whole human race, but mental wellbeing is a critical part of the scenario.^[1] COVID-19 diagnostic, tracking, monitoring, and containment mechanisms have been developed in a number of countries.^[18] However, there are still no clear epidemiological data on the psychological effects of diseases or their effect on public health. A recent Chinese study provided latest insights in this regard. Approximately half of those interviewed listed the epidemic's psychological effect as mild to extreme, and about one-third reported mild to serious anxiety.^[19] Similar data were reported in Japan, where there was dramatic economic impact, too.^[20]

A pandemic is just one of nature's ways of finding some kind of balance. However, this time of crisis is generating stress throughout the whole population. Apart from physical suffering, it is not uncommon for confirmed or suspected cases of COVID-19 to suffer from enormous psychological pressure and other health-related problems. Reported and suspected COVID-19 patients should be afraid of serious illness and contagion.^[21] Therefore, they may experience loneliness, denial, anxiety, insomnia, depression, and despair, which may lower treatment adherence. Due to confusion about their health status, reported isolated cases can suffer from anxiety and develop obsessive-compulsive symptoms, such as frequent temperature checks and disinfection. Further, strict quarantine and mandatory contact tracing policy by health authorities could cause societal rejection,

financial loss, discrimination, and stigmatization.^[22,23] The limited knowledge of the COVID-19 and the hit and miss news may lead to anxiety and fear in public.^[22, 24] Under the isolation steps, the general population may also feel boredom, frustration and irritability.^[23] Frontline health care workers, especially those in Wuhan, have close contact with infected patients. Excessive workload, isolation, and discrimination are frequently reported^[25], and thus, they are highly vulnerable to experiencing physical exhaustion, fear, emotion disturbance, and sleep problems.^[25] A recent study involving 1,563 health professionals found that more than half (50.7%) of the participants reported depressive symptoms, 44.7% anxiety, and 36.1% sleep disturbance.^[26] The psychological impact of COVID-19 can be well fit into the frame of acute/persistent stress. The rapid transmission of SARS-CoV-2 would increase the probability of mental illness and psychiatric morbidity in various subpopulations, not only due to prolonged quarantine and large negative news representation, but also affected by the growing number of reported and suspected cases and deaths in China and the globe regular.

Clinical features

Since the first reports of the CoVID-19 disease were related to direct access to Wuhan's Huanan Seafood Wholesale Market, the principal mechanism was believed to be the animal-to-human transmission. Even, this sensitivity process was not correlated with subsequent events. It was also assumed that the virus might also be transferred from person to person, and that symptomatic persons are the most likely cause of COVID-19 dissemination. Before symptoms arise, the probability of transmission appears infrequent, but it cannot be ruled out. There are reports that the infection may be spread by persons who live asymptotically.^[17] Data indicate through

research that the mean age of affected patients was 59 years, with a variation of between 15 and 89 years. Therefore, they did not record medical incidents of children under the age of 15. There were no significant variations between the sexes (56 percent male).^[17] About half of the crucial patients (49.0 percent) died were impaired by preexisting comorbidities such as coronary disease, asthma, chronic lung illness, oncological disorders. Though 1 percent of patients were nine years of age or less, this category did not have serious incidents. Older people face a more extraordinary amount and prevalence of chronic illnesses and disorders, including immune dysfunction.^[27]

The Chinese CDC report's writers grouped the disease's clinical symptoms by severity:

- Mild disease: non-pneumonia and mild pneumonia; in 81 percent of cases, this happened.
- Moderate disease: dyspnea, respiratory frequency $\geq 30/\text{min}$, blood oxygen saturation (SpO₂) $\leq 93\%$, PaO₂/FiO₂ ratio or P/F [the ratio between the blood pressure of the oxygen (partial pressure of oxygen, PaO₂) and the percentage of oxygen supplied (fraction of inspired oxygen, FiO₂)] < 300 , and/or lung infiltrates $> 50\%$ within 24 to 48 hours; this occurred in 14% of cases.
- Severe disease: cardiac collapse, septic shock and/or multiple organ damage (MOD) or malfunction (MOF); in 5 percent of cases, this happened.^[28]

Coronavirus signs involved nausea, cough, exhaustion, and trouble breathing. The Chinese WHO report reported that no one knows the exact time of incubation for this virus, but after exposure, symptoms will show up anytime from one day to two weeks.^[29] Based on evidence from

the first cases in Wuhan and inquiries carried out by the Chinese CDC and local CDCs, the incubation duration may usually be between 3 to 7 days and up to 2 weeks as the longest span from infection to symptoms was 12.5 days (95 percent CI, 9.2 to 18).^[30] Individuals at the edge of ages and any immunocompromised are at the greatest danger.

Centre for Disease Control and Prevention (CDC) guidelines on who should test for COVID-19^[31]

CDC has provided some particular guidelines to rule out the person affected with COVID-19:

- Hospitalized patients with COVID-19 compliant signs and symptoms to notify decisions about prevention of infections.
- Specific symptomatic populations such as elderly adults and persons with underlying medical problems and/or an immunocompromised condition that may place them at a higher risk for adverse results (e.g., diabetes, cardiac disease, immunosuppressive drugs, chronic lung disease, chronic kidney disease).
- Any individual, including health care staff, who had close contact with a suspect or laboratory-confirmed COVID-19 patient within 14 days of the onset of the symptom, or who has travel history from restricted areas within 14 days of the onset of the symptom.^[32]

The psychological burden of COVID-19 Fear of Social Distancing

Social distancing is a new arising terminology which implies avoiding crowds. Man has social relations and social interactions, which are more essential and vital part of their life. Those social ties and communications have been integral in the way of life from human nature. Moreover, if these

deep positive relations are missing, it contributes to high states of distress both in body and mind. Loneliness, drives of fear, depression, states of pain, psychiatric illness, safety risks, and several other problems influence the existence of the person and community as a whole. ^[29]It is a deliberate attempt to reduce people-to-people interaction to minimize virus transmission. Social distancing is a technique for public health to restrict the transmission of infectious diseases like COVID-19. Mainly if there is no sign and no party at risk, social distancing will be observed. There is no question that social distancing and self-quarantine are the solutions that bring stress to all persons, especially the elderly and the children; nevertheless, they need to be observed. There can be a sense of ostracism, neglect, and loneliness of older persons when isolated.

This may make a condition that is still troubling even more complicated for the elderly, particularly for those who are victims of depression or other mental health issues. Older adults can become more nervous, frustrated, depressed, irritated, and withdrawn during the epidemic or while in quarantine, especially in Isolation for those with cognitive impairment or dementia. Through informal networks (families) and medical professionals, those people need emotional support. Simple situational facts should be communicated and given to people with or without a cognitive disability. Information may be replicated with a simple, descriptive, polite, and careful manner whenever appropriate. The cell phone, the Internet should be used to "decrease people's feelings of loneliness." Consultants can offer free online assistance to individuals in the immediate region. ^[1]As a team member, the prescribing physician will direct patients, rescue workers, staff, case indicators, educators, civic members, and quarantine site employees in how to offer critical emotional and logistical assistance

to those impacted. For children to convey their anxiety and grief, specific attention is required. In such a scenario, they can search for more attachment and are more dependent on parents. The COVID-19 would be addressed in frank and age-appropriate knowledge with the children. ^[1] People with a mental disorder may be particularly susceptible to the consequences of generalized fear and danger. Instead of abuse, sympathy should be provided to people with COVID-19, help through phone and email, and assistance where necessary, but never aggression or judgment. ^[1] In the case of women who are breastfeeding, UNFPA also advised that they will not be segregated from their infant when they are pregnant, although there is no indication that pathogens may be spread by milk. UNFPA advised mothers to wear masks, wash their hands before feeding and clean infected surfaces while holding or closing the infant. ^[33]

Anxiety and Stress

COVID-19 currently affects more than 160 nations, prompting fears regarding generalized fear and growing distress among individuals who are subjected to (real or perceived) the virus. Society's difficulty and issues affect each person globally to variable magnitudes. Recent research indicates that people placed in Isolation and quarantine encounter major depression in the form of fear, frustration, uncertainty, and symptoms of post-traumatic stress (Brooks et al., 2020). ^[34] Pandemics can trigger elevated stress levels; anxiety is a reasonable reaction to any stressful circumstance. During the COVID-19 pandemic, this research attempted to assess the awareness, mentality, distress experience, and perceived need for mental health treatment among the adult Indian community. ^[35] Pandemics are not only a scientific phenomenon; in other ways, they impact people and society and create a disturbance. Fear and

tension were often associated with such outbreaks. As worries increase about the potential danger, people may begin to gather masks, other medical aid, and food products. Sometimes that is accompanied by anxiety-related reactions, sleep disruptions, and poor overall reported health status. People with a mental disorder may be particularly susceptible to the consequences of mass fear and danger. ^[36]

Psychosocial Impact – Panic Reactions and Feeling of Loneliness

At the height of a high-intensity epidemic, there is a loss of mental and social stability. It is necessary that interventions, procedures for recognizing, addressing and managing mental health issues would be developed for both patients and health-care providers in the middle of the Covid-19 crisis coupled with public health emergency response initiatives. ^[37] Since COVID-19 is a new epidemic with the most destructive global consequences, its development and expansion are creating frustration, anxiety, and terror in the general population. Fear is the location where hatred and stigma grows. Social stigma emerged when certain groups (Indians in the north-east) was identified as the cause of this outbreak (WHO, 2020c). ^[3]

Increment in suicidal cases

Past work has shown a wide variety of psychological impact that diseases may have on individuals. ^[38] Current psychological signs of those without mental disorder may trigger or aggravate the situation of those with preexisting mental disease and bring anxiety to the carers of those affected. ^[39] Suicidal cases have been recorded in India but also in other countries, including Italy, where two contaminated Italian nurses committed suicide in a span of a few days, presumably due to fear of transmitting COVID-19 to patients. Fear and

anxiety of becoming sick or dying, helplessness can cause a rise in suicide rates by 2020. ^[40]

Pandemics are distinguished from simple medical occurrences. They seriously interrupt personal and professional lives and impact multilevel individuals and communities. Duan and Zhu (2020) reported a rapid increase in psychiatric disorders, including fear, depression, and tension during this outbreak. ^[5] Isolation and physical distancing are crucial approaches advocated for preventing an epidemic of this type—these may have significant impacts on our existence and relationships. Consequently, it is essential to take care of these various aspects in which the COVID-19 pandemic could influence the mental wellbeing of people. ^[41]:

1. The risk of reliving a pandemic because you have encountered another pandemic/epidemic of infectious illness in your lifespan (such as Nipah, Ebola, or SARS).
2. Fear of missing life due to loneliness or noticeable travel and social-behavioral limits.
3. A deep feeling of self-insecurity and caring for one another.
4. Social / physical distancing distress contributes to loss of interaction with relatives or friends who might be residing far apart. For some, it may be the other way round: being huddled alongside a big family for the first time leads to mixed feelings.
5. The phobia of going out of the home.
6. The stigma of those with conditions such as fever, cough, or sneezing, it may be a flu.
7. The compulsive need to store food, essential or medical supplies like antibiotics, painkillers, anti-allergic drugs, face masks, sanitizers.
8. Psychological discomfort around the rising fear that is regularly compounding several times

because of repeated advertising in all news sources.

9. At the frontier of COVID-19 monitoring or reporting of health-care providers, nurses, volunteers, virologists, or media people: exhaustion, burnout, anger, or the risk of acquiring or spreading infection.

Throughout this circumstance context, patients and health-care staff at the front are susceptible to the psychological effects of coronavirus. ^[42-44] They do not have exposure to treatment because of the limitations on widespread quarantine and the closing of public transport. ^[45] Public fear can increase after the first death during disease outbreaks, expanded media coverage, and an increasing number of new cases. Hence, for several purposes, widespread quarantine is likely to increase anxiety significantly. A heightened fear may also have a blow-on impact on specific health measures. ^[46]

Prevention

The following general guidelines are given by the WHO and other organizations:

- Avoid direct communication with people who have severe respiratory infections.
- Wash your hands regularly, particularly after touching infected people or their surroundings.
- Stop unsafe interaction with farm and domestic animals or wild animals.
- People with signs of acute airway infection should maintain their distance, using disposable tissues or clothing to cover coughs or sneezes and wash their hands.
- Strengthen the implementation of strict sanitation procedures for the avoidance and management of diseases, in particular in emergency medicine departments.

- Those who are immunocompromised must stop group reunions.

The most critical techniques for the population to follow is to regularly wash their hands and use portable hand sanitizer after engaging with a possibly polluted area, to prevent interaction with their face and mouth. ^[17] UNESCO (2020) reported in its recent study, "Governments in 61 countries have declared or enforced the closing of educational facilities to slow the transmission of the disease". ^[29] According to UNESCO, classrooms, colleges, and universities have been closed in over 39 nations, impacting about 420 million children and young adults. ^[29] These are the most important steps to prevent us from the infection of the virus. The Health institute and WHO, doctors, police, and health care staff are continuously working for us and suggesting to stay home for the safety of all around us.

Treatment

Treatment is mainly supportive and symptomatic. The spread of COVID-19 infection from person to individual has contributed to the separation of patients despite a range of therapies. There are actually no effective antiviral medications or vaccinations against infection with COVID-19 for future human therapy. ^[47] Multiple antiviral treatments are being attempted to help patients suffering from severe virus symptoms. Hydroxychloroquine and azithromycin have been used in some open-label non-randomized clinical trials, and Lopinavir or ritonavir clinical trials reported that the viral loads decreased significantly, and drugs helped the patient to improved clinically. ^[48] There are numerous effective drugs and protocols that are being used in day to day management of a patient with COVID-19. We do not have a targeted cure yet. Management of the disorder remains a mystery; experts are introducing many medications such as

chloroquine phosphate, favipiravir, and remdesivir in multiple phases of clinical trials. Chloroquine phosphate, which has been used for several years against coronavirus, was shown to effectively prevent coronavirus infection during in vitro trials and is being studied in human trials.^[49] Right now, the only alternative left is symptomatic care of the affected persons. Some studies on vaccination and clinical trials have already started globally, including one in India.^[50]

Conclusion

According to Centre for Disease Control and Prevention (CDC), "Corona Virus Disease 2019 (COVID-19), an epidemic may be traumatic to citizens. Anxiety and fear over an illness may be debilitating in adults and infants, and trigger intense emotions.^[29] This pandemic harms people's physical health as well as their mental health.

WHO Revised strategies for improving people's mental wellbeing, including:

- i. Avoid viewing to read and listen to news that would build a feeling of panic.
- ii. All who is searching for useful knowledge from various outlets to defend themselves and their loved ones.
- iii. Taking a break from the social network and the stuff that causes your panic and anxiety.

For a person at high risk for COVID-19 severe disease that involves older persons, sick people, and children, preventive self-separation is advised. The Coronavirus illness is having a severe effect on the lives of the people as a whole. Several nations have announced emergencies and unparalleled lockdowns. The Governments are closing down schools, institutions, universities, pubs sector, supermarket, shopping center, etc. This has

generated an atmosphere within the existing and emerging populations of terror, anxiety, and stress.

^[29]Governments, journalists, physicians, academics, actors, police, and other common partners pleaded to the public to stop public events, including sports, religious services, family activities, meetings, and school classes, to prevent the dissemination of coronavirus infection worldwide.

^[51] All health-care staff should recognize the disease, operate, and support treatment delivery. Health care workers should be advised of the measures available to keep the illness from developing and spreading. The maintenance of social networks in isolated circumstances is vital for mental wellbeing. The prescribing practitioner should ensure that impacted individuals provide adequate psychological and functional assistance.

^[1] In another research, repeated problematic behaviors (anger, irritability, worry) and concern regarding COVID-19 infection contributing to social media posting were observed in 1/6th and 1/3rd, respectively, of the people involved.^[35] Many huge health problems are mental wellbeing challenges that are projected to escalate day by day during this epidemic. In this pandemic, there is a shortage of studies that examined the mental wellbeing issues. Given the importance of all the above considerations, during the coronavirus pandemic in India, it was aimed at determining awareness, thinking and behavior, anxiety, and perceived emotional needs in the population.

^[35]For now, all facets of life have changed drastically. The category more vulnerable to COVID-19 are older adults, and those suffering from severe underlying medical conditions. The general population living in long-term care facilities is people that are also aged and have numerous comorbidities.^[31] The preference for contamination in older adults and people with serious underlying health problems is one of the distinguishing characteristics of COVID-19,

culminating in higher levels of risk and mortality.^[52] The psychological and socioeconomic effect of this disease is unparalleled in our lives, with social differences and consequent prohibitions on transport, closures of schools and many enterprises, cancelation of leisure events, and concern of lack of essential living needs such as food, drugs, cleaning and hygiene products.^[31] Moreover, many cases of mental health crises because of this novel coronavirus phobia have already been reported in India.^[53] Mainly, the asymptomatic nature of the disease and social disconnectedness is fuelling the mental health issues among the older population while most of the youths are suffering from the fear of uncertain future, academic year, and job losses.^[54] There are numerous types of psychological problems associated with COVID-19. The evolving mental health issues associated with this global event may become long-lasting health concerns, loneliness and stigma. Global health measures should be engaged to address psychosocial stressors, particularly those related to the general population's use of isolation / quarantine, fear and vulnerability. A worldwide inclusive response should include a focus on the mental health impact of patients and the general population.^[55]

As the symptoms primarily have anxiety at its core, psychotherapy, or counseling with a cognitive-behavioral focus could be helpful in these conditions. The underlying principle of Cognitive behavior therapy (CBT) focuses on recognizing faulty ways of thinking, identifying cognitive errors in thinking, and restructuring them. CBT is uniquely suited to help people gain control of their lives and feel better. However, many people in the preliminary stage may not require intensive CBT and may benefit from structured crisis intervention and supportive counseling. People with more intense psychological symptoms may need structured CBT. Considering the preventive and

restrictive measures laid by authorities in different countries, therapy can be administered using online/telephonic mode, as already in practice in different parts of the world.^[56] People could have feel and experience anxious thoughts. The approach to deal with these would be conventionally CBT in nature, including identifying the wrong ways of thinking, examining the evidence (chances of one getting infected), considering odds, considering alternative ways of thinking, and assessing facts. Behavioral components, too, must be included in the process. Activity scheduling to maintain productivity and inclusion of social connectedness is very much recommended. Relaxation techniques, yoga, and indoor exercises can help a great deal to counter the stress. The psychological impact of corona pandemic can well be understood within the frame of stress reaction. The amelioration of symptoms could be self. Mild stress can be countered with Psychoeducation and crisis intervention approach. However, people directly affected and with preexisting mental/physical health conditions may require structured psychotherapy within a cognitive-behavioral framework and expected to have positive outcomes.^[57]

Though the quality of evidence in the available literature is relatively low, it still contains numerous valuable observations and suggestions for all professionals working in this field, whether they are associated with psychiatric or general hospitals or working in the community. As the number of patients affected by this pandemic continues to increase, the psychiatric profession – particularly in Asian countries – faces both a challenge and an opportunity; the challenge of addressing the numerous barriers.^[58]

Thus, through our review, it is suggested that people should follow all guidelines of World Health Organization (WHO) and lockdown

followed by government, and maintain physical distance, avoid gathering, use masks, and other medical appliances to keep themselves away from the infection. But besides this, everyone should take care of their mental health also in this critical situation, where patience, care, the right information, awareness are the primary and most essential tools to be psychologically healthy and fit. This is the duty of all professionals, health care workers, frontline worriers, and citizens of the country to support each other to fight against the disease for our better tomorrow.

Conflict of interest

There is no conflict of interest.

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Authors' contributions

I.L.S., A.S.,T.T.,T.S. have participated in the study design, data collection, data evaluation, drafting and analysis. N.C.,A. have contributed to manuscript concept and design. All authors have participated in the protocol development, collection, and analysis of the data, manuscript writing and final approval.

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