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# Impact of COVID-19 on Psychological Status of General Population

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## Abstract

WHO has declared COVID-19 as a pandemic on March 11, 2020. Like the virus affects the entire body, the pandemic affected the entire global trade and economy, leading to the loss of jobs and businesses. Thus, it would be appropriate to quote COVID-19 as a social disease rather than treating only as a medical condition. The COVID-19 pandemic, being a social disease, affects all the individuals of the society in terms of their physical, mental, social health and challenges the economic status of the entire population, irrespective of whether they were physically sick. However, the mental health impact of the COVID-19 pandemic has been overlooked, given its benign nature. We can anticipate a higher prevalence of psychological distress during any pandemic than typical situations. The COVID-19 instils fear and anxiety among people. Isolation and quarantine to reduce disease transmission have a negative impact on one's mental health. The lockdowns lead to the closure of educational institutions and workplaces, loss of jobs, economic loss, lack of physical activity, restrictions on travel and gatherings. All these factors cumulatively affected the mental stamina of millions worldwide. Given its importance, we have reviewed the impact of COVID-19 on the psychological status of general population.

**Keywords:** Anxiety, COVID-19, Mental Health, Pandemics

## 1. Introduction

Years later, when there will still be arguments, discussions and research on whether a virus is a living organism or not, we will recollect the devastating effects a virus can cause. Till December 2019, probably no ordinary person, even the scientific community, would have thought that a tiny organism would challenge all human beings across the globe, despite their race, culture, ethnicity, religion and socioeconomic status. On December 31 2019, a cluster of atypical viral pneumonia cases of unknown cause was reported from Wuhan, China [1]. Days later, the infectious agent was identified as a novel coronavirus, with similarity in structure to Severe Acute Respiratory Virus (SARS), and therefore named as SARS-CoV-2. The World Health Organisation (WHO) coined the term Coronavirus Disease 2019 (COVID-19), given the fact that the first case was detected in December 2019. Since its discovery, the virus has affected over 139 million individuals

globally, claimed nearly three million deaths in just 500 days, and the effect still continues [2]. The virus, besides primarily affecting the lungs, attacks almost all the essential organs, such as the heart, kidneys, and liver, to name a few. Given its novel nature, transmissibility, alarming levels of spread and severity and susceptibility of the entire world, WHO declared COVID-19 as a pandemic on March 11, 2020 [1]. Several countries worldwide resorted to a complete lockdown to minimise the spread and prepare their health system, although the duration and frequency of the lockdowns varied across nations. Like the virus affects the entire body, the pandemic affected the entire global trade and economy, leading to the loss of jobs and businesses [3]. Thus, it would be appropriate to quote COVID-19 as a social disease rather than treating only as a medical condition. The COVID-19 pandemic, being a social disease, affects all the individuals of the society in terms of their physical, mental, social health and challenges the economic status of the entire population, irrespective of whether they were physically sick. Research studies on the physical impact of COVID-19 in terms of disease complications are being done globally. The social and economic aspects of the pandemic are also studied by the subject experts, as it affects day-to-day living. However, the mental health impact of the COVID-19 pandemic has been overlooked, given its benign nature.

We can anticipate a higher prevalence of psychological distress during any pandemic than typical situations [4]. The COVID-19 disease instils fear and anxiety among people. Excessive availability of misinformation in social media and lack of awareness among the general population leads to misinterpretation, misconception, stigma and rumours. Isolation and quarantine to reduce disease transmission have a negative impact on one's mental health. The lockdowns lead to the closure of educational institutions and workplaces, loss of jobs, economic loss, lack of physical activity, restrictions on travel and gatherings. All these factors cumulatively affected the mental stamina of millions worldwide. Besides, people recovering from COVID-19 can have its impact even beyond three months after recovery, known as long COVID. Mental comorbidities have a sizeable contribution to the long COVID symptoms.

Despite being benign, the psychological morbidities can affect the quality of life and productivity, mainly due to its chronic nature. Thus, it is essential to identify and treat, and wherever possible, prevent psychological morbidities for a better quality of life and productivity during and after the pandemic. A review of research studies quantifying the prevalence of various psychological morbidities among the general population during the COVID-19 pandemic will help understand the psychological needs and gaps.

## **2. Impact of COVID-19 pandemic on psychological status**

### **2.1 Anxiety**

The pandemic situation has raised a general sense of alarm in the world. In situations of uncertainty, people tend to get anxious about the problems quite quickly. Various literature shows that it was not only COVID-19 patients but also the general population and the health care workers who experienced mental crisis. The prevalence of anxiety has increased in all the groups compared to the pre-pandemic situation [5]. COVID-19 patients fear being stigmatised in society and experience guilt for spreading it in the community. Health care workers are anxious about acquiring the infection from the patients, and the excess workload also deprives them of sleep, rest and appropriate nutrition. Simultaneously, the general public

experiences alteration in the lifestyle due to imposed infection prevention and control measures, leading to anxiety.

While anxiety to the pandemic situation is a normal response, too much anxiety can start to cause harm. It is advisable to seek help in case of excess anxiety. Friends and family play an essential role in providing mental support. Those who are prone to anxiety need to be careful about curating their exposure to social media updates and news on mass media to avoid triggers.

## **2.2 Depression**

Depression is one of the common mental health issues faced in today's world. In all the previous pandemic situations, a rise in the prevalence of depression was documented, and the COVID-19 pandemic was no exception to that. Various research was done to assess the prevalence of depression during the COVID-19 pandemic, and almost all the studies reveal an increase [6].

Wearing masks by everyone is a new initiative adopted by all the countries for the COVID-19 pandemic. It has changed the lives of the general population drastically by the way they view this disease. Masks on everyone's face are a symbol and a constant reminder of the deadliness of this disease. It also negatively impacts many people. Consistent and repeated alarms about the COVID-19 have increased the fear among the general population. The strategies to prevent the spread of diseases, such as lockdown, quarantine, and isolation practices, have also installed fear. Lockdown has caused a severe economic crisis in many countries. It has affected the daily income of many people and leads many families into poverty and hunger. Quarantine and isolation have kept people away from each other, thus depriving them of a social life. This loneliness is also a prime driver of depression.

Most people experience somatic symptoms such as body pain, headache and joint pains. Endless treatment for these conditions by ignoring the depression behind all these symptoms is of no use. Engaging in communication with friends, family, and other social groups can make one feel less isolated. In case the symptoms persist, it's better to seek the help of health care providers. Adequate support for mental health is largely lacking in the current scenario due to diversion of the health workforce towards critical care although various organisations like World Health Organisation and Centre for Disease Control have highlighted the importance of the same for the betterment of the people [6, 7]. Wherever available, it is advisable to create and widen awareness about the existence of such services so that those in need may avail the necessary help.

## **2.3 Stress and PTSS**

Pandemic situations are likely to disrupt the everyday lives of people and not everyone takes up these lifestyle changes casually. Any deviation from everyday life leads to altered mental status in many individuals. As we are currently facing the COVID-19 pandemic, we are more involved in studying the dynamics of the disease. But what we are neglecting is the mental health of the people. COVID-19 has changed the lifestyle of all people across the world, with new rules being implemented daily. Public health interventions that are essential to control the spread of infection have also isolated the people. Many are experiencing increased stress due to this. Stress leads to increased fear, anger, sadness, or frustration, Changes in appetite, and interests, Difficulty concentrating and making decisions, difficulty sleeping, physical reactions, such as headaches, body pains, stomach problems, and skin rashes, worsening of chronic & mental health problems and Increased in substance abuse.

There are specific ways to deal with stress, such as increases physical activity, eating a healthy diet, avoid watching excess news channels on COVID-19 situations, talking with a loved one, and connecting with the community via social media. Talking with your friends and family will reduce your stress levels and alleviate their fears and anxiety regarding the situation. In case of experiencing a mental crisis, it is better to seek health care advice rather than dealing with the problem by yourself. In case of extreme stress, people may have thoughts of suicide. It's advisable to contact the toll-free number for suicide control in your country and seek health care immediately.

The COVID-19 pandemic has been creating serious social and financial distress that has led to heightened traumatic stress reactions [8–10]. The stress might also be a reaction to fear of developing the infection for themselves or for their family and friends [11]. The unpredictability associated with the outcomes of COVID-19 infection and uncontrollable burden leading to multiple waves in most of the countries across the world has further worsened the psychological stress among the general public [12]. Though, such stress reactions are expected during any pandemic situation, it is the long-term implications of such condition that makes it worrisome. Prolonged exposure to stress can lead to exacerbations of chronic disease conditions and accelerates the development of disease processes [13]. It can also increase the risk of other comorbid mental health conditions such as anxiety, depression and make the people to take up harmful habits such as smoking, alcohol consumption and drug abuse etc. [14].

Recent evidences have also reported that such stress reactions along with disturbed re-experiencing and intensified arousal is prevalent [15, 16]. However, the exposure to pandemic does not fit into the definitions of post-traumatic stress disorder (PTSD) or its prevailing models [17, 18]. The prevailing models and the DSM-5 criteria [19], has attributed the traumatic stress disorders to the past and direct exposure to a life-threatening event. Hence, the emerging evidence of COVID-19 and its association with PTSD do not account for these models or definitions. The stress reaction to the COVID-19 or any pandemics relates more to the future rather than the past, indirect exposure through media coverage rather than direct exposure to the virus, and stressful situations such as poverty, unemployment, social isolation that does not meet the Criterion A such as actual/threatened death, injury or violence [15]. There have also been previous evidences that shows that traumatic stress reactions can be related to the future, indirect exposure to the trauma, and non-Criterion A events [20, 21]. Addis DR has suggested that the imagination and remembrance are basically the same process as both those events has involved the mental rendering experience [21, 22]. It is because the evidences have pointed out that the neural networks underlying the past and future remembrance are similar [23].

Given the scale and nature of COVID-19, it is possible for the general public to develop PTSD related symptoms, especially during the initial weeks of the pandemic due to the unpredictable and unknown nature of the infection. Media exposure play an important role in the development of PTSD symptoms as it further worsens the fear among the general public by seeing the daily rise in the cases and deaths due to the pandemic. Moreover, people search for additional information about the pandemic through social media and it can raise their fear level given the number of conspiracy theories and false information circulated around in the social media handles. Hence, it is possible for them to experience PTSD by indirect pandemic exposure through the 24-hour news cycle. This shows that the people would experience PTSD in response to the COVID-19 pandemic, regardless of the direct exposure to virus or indirectly through different forms of media or due to negative impact of other experiences such as lockdown, quarantine, isolation etc.

## **2.4 Sleep quality and insomnia**

Sleep is an essential part of a human life. During the times of pandemic, it becomes much more essential in terms of both quality and quantity, as it has several mental and physical health benefits. Lack of sleep and poor sleep quality can seriously impair the psychological functioning of the people and affect their decision-making process. It can also jeopardise the people's immune response and render them more susceptible to contracting the virus and developing the disease [24]. Recent evidence studying various psychological problems among general public, healthcare workers and COVID-19 patients together have pointed out that the poor sleep quality was the most common psychological morbidity during this COVID-19 pandemic [25]. Among the general public, it was found to be the second most common psychological problem [25]. Another review conducted to study the sleep problems exclusively, have also found that almost 40% of the population have poor sleep quality [26]. Despite such high burden, sleep problems are underestimated compared to other mental health problems during any pandemic.

Sleep related problems during a pandemic should not be ignored as it can lead to some serious consequences in their future. Poor sleep quality or insomnia during a pandemic can lead to future risk of obesity, cardiovascular & metabolic conditions, cognition and mood disorders, and can even lead to suicidal ideation and death [27, 28]. This can also result in accelerated cellular senescence leading to rapid and overall ageing. Stressful nature of the pandemic in combination with the personal vulnerability factors plays an important role in the mechanism and pathogenesis of the sleep disturbances [29]. This can exacerbate an existing sleep related conditions and also facilitate the emergence of a newer condition. During this pandemic, several countries have implemented widespread lockdowns, leading to marked change in the habits, customs and practices at workplace and home in the entire population. Combination of this stress of widespread infection, abrupt stop in the social interactions and disruption in the daily routines might have dramatically affected the people's sense of well-being and security and influenced the sleep disturbances [30].

## **3. Factors influencing psychological impact of COVID-19**

The impact of COVID-19 on the society's psyche has been affected by various existing differences and touch upon the core ideas of equity and intersectional experiences of people along cultural, racial, professional and economic lines. The COVID-19 pandemic has been not only a health crisis but also a crucial situation that affected societies and economies to the core and increased inequalities at a global scale.

## **4. Health threat, fear and uncertainty**

The unprecedented nature of the pandemic created a sudden sense of uncertainty regarding not only health but also educational and economic circumstances. As an emerging disease, scientific evidence has been scarce from the start related to various infection characteristics like transmissibility, routes of transmission, signs and symptoms and options for treatment. The information received from reliable sources changed as per the emerging evidence, which gave way to doubts and mistrust in the general public, creating a fertile ground for misinformation and disinformation. This leads to more people being victims of fear than of the actual

disease [31]. At the height of panic, there were even reports of people resorting to suicide for fear of disease-related complications [32].

The source of fear has been hypothesised to be four-fold. These are fears arising for self, for others, of not knowing, and of what action needs to be taken. In case of fear of the self/body, people become hyper-aware of any changes and immediately start associating it with a possible infection leading to morbidity or death. The fear of/for significant others relates to relationships. There might be a sense of guarding oneself against any external person who might prove to be a source of the disease, as well as fearing that someone close to one might get affected. Fear of the unknown is a prime driver of anxiety as it leads to frantic searching for any updates during which crucial updates from reliable sources might actually end up being missed. Fear of courses of action pertain to doubts regarding carrying out daily activities like shopping in the scenario of social distancing, and a pull towards other hyperactive compensatory behaviours like increased social media usage to cope with the altered routines. These may be managed by clear awareness regarding susceptibility, fostering proper attachments with people and promoting emotional support and responsible behaviours [33].

Fear of the disease has proven to be a double-edged sword. Functional fear of contracting COVID-19 has been shown to be the only predictor of positive behaviour change like social distancing and hand hygiene irrespective of political interventions [34]. While some level of fear is good to ensure that people stick to national guidelines, preventive protocols and social distancing, it had the potential of generating panic in the community and increasing psychological distress. There have been records of delayed health-care seeking behaviour for emergency conditions due to fear of COVID-19 leading to negative outcomes, which entails that the public should be made aware of the risks posed by general health conditions even in the light of the pandemic [35].

## **5. Impact on livelihood**

COVID-19 created one of the worst worldwide economic crises in recent times. The abrupt suspension of trade routes and public health measures like shutting down of factories and marketplaces had a direct effect on halting the cash flow; shutting down banks impeded access to transactions. In addition, governments were burdened with the sudden rise in cost of healthcare including management of hospitals, quarantine and isolation facilities, procurement and/or production of protective equipment and sanitisers, as well as funding for research drives in areas of prevention and cure.

The United National Development Programme (UNDP) through its global assessment of the socio-economic impact found that COVID-19 was found to affect people in varied ways. An estimated 40–60 million people may get pushed to poverty because of economic shocks. While the corporate workforce largely retained job security throughout the pandemic due to the option of working from home, historically marginalised communities like those from the unorganised sectors bore the brunt of the economic standstill. Around 1.6 billion informal workers are expected to have lost jobs by the end of the pandemic of which 60% will have little or no savings and no access to social security. This in turn will also fuel an increase in food insecurity, mostly in low- and middle- income countries [36]. Survey's report 62% of households in India with a disruption to their dietary habits due to reduced access, particularly for high-nutrition foods like vegetables and dairy products [37]. Nearly 94% of Bangladeshi persons from lower income groups reported that the pandemic had affected their livelihood, and recorded high stress scores due to the

worries regarding livelihood in addition to fear of infection [38]. Impact on livelihood was found to be a major predictor of mental health problems among Chinese adults [39]. Lower economic classes typically have less financial literacy and lower savings as well as lack of access to manage financial safety nets like emergency funds or access to banks and loans, which worsen their existing plight.

These situations heavily compound the gravity of the pandemic as well as complicate the ability of the general public to stick to COVID-19 protocols. The choice between earning a livelihood and possibly contracting the disease puts a large amount of mental stress on the working population.

## **6. Lockdown and restrictions**

The COVID-19 pandemic typically came with four types of restrictions: large-scale regional lockdowns and curfews; isolation of all identified patients; home-based or institutional quarantine of those expected to be at risk; and general public health safety measures like limiting access to social spaces like restaurants, movie theatres. These created widespread implications of the same that were different from place to place, and across different income groups. In countries like India, where there exists a large migrant working population, a sudden lockdown without mechanisms generated panic due to a sudden loss of livelihood. Most migrants faced problems like eviction, access to food, healthcare, lack of transportation and severe economic stress. Almost no mechanism existed to provide psychological support in those circumstances [40].

Studies that looked at reactions to the lockdown reported moderate to extremely severe scores of anxiety and stress [41]. The process of lockdown was marked by large-scale catastrophising, including speculations and predictions of an apocalyptic nature [42]. The psychological effects have been documented to increase with the progression of the lockdown, while personal quarantine had significant effect on emotional responses like anger, fear and anxiety from the beginning [43]. Irrational activities like panic buying were noted across the globe as people resorted to hoarding as a coping mechanism. There are five main causes for psychological effects of the lockdown – prolongation of the lockdown beyond an expected duration, fear of contamination and infection, feelings of frustration and boredom, inadequate access to essential items and inadequate access to information [44]. Lack of information was primarily faced by people without access to internet or electronic mass media. What has been described as a parallel pandemic is a worsening of symptoms in those with existing mental health problems due to sudden disruption of routine activities and decreased access to healthcare (both due to suspension of health centres, transportation issues and curfew). Lack of access to healthcare was a major cause of stress to older persons as well, who were typically on chronic medications that required follow up and re-fill, as well as belonged to the high-risk population in terms of morbidity from COVID-19, resulting in another conflicting situation. Setting up telemedicine units and deploying on-call services helped to an extent in areas where the infrastructure allowed for it [44].

## **7. Social stigma**

Stigmatic behaviour in health entails associating labelling, stereotyping, and discriminating against people due to a perceived association between them and a disease that is usually based on misinformation [45]. Theorists have postulated

that stigma and discriminatory behaviour are put in place by ideologies that justify the requirement of the same and consider the same as fair and appropriate [46]. Although the question of why stigmatic behaviour arises is complex, the reactions during the pandemic arose due to a fear of the unknown that created more often than not they arise against existing groups, like persons of a certain ethnicity, faith or economic status. The COVID-19 pandemic saw a gradual shift in stigmatic behaviour that affected different sects of people at different points of time. The immediate target after the acknowledgement of the disease were Asians, especially of Chinese descent. In spite of calls by the United Nations and World Health Organisation to stick to the scientific name of the pathogen, large groups including politicians and media houses resorted to terming it the “Chinese virus” or the “Wuhan” virus, thus enabling a rapid spread of hatred aimed at those communities. There were incidents of abuse and bullying against Asians in many parts of the world, especially in cyber spaces like Twitter. In some cases, it extended to calls for boycotting their businesses and disallowing entry to educational institutions. The next group to be affected were healthcare and frontline workers who faced substantial social ostracization including eviction from housing societies and public transport in various countries around the world in the misbelief that they acted as carriers of transmission [47]. The identification of a case cluster at a religious convention led to widespread communal hatred against a specific religious community in India [48]. Persons who failed to follow preventive measures or broke curfews were also identified as targets for public shaming and bullying in line with the concept of ‘the immoral other’, labelled as ‘potential murderers’ and ‘super spreaders’ and even faced criminal charges in many places to the point of facing murder charges [49].

The impact of stigma is multi-fold. It creates an unhealthy environment where people hide their illness and health seeking behaviour gets impaired, which in turn leads to delayed testing, diagnosis and the possibility of higher morbidity and mortality resulting from delayed care, as well as higher transmission probability. The psychological impact of the social behaviour thus translates to being a driver of the pandemic. Various ways suggested to deal with the crisis and reverse the effects of stigma were to actively discourage any associations with ethnic groups by using the appropriate scientific terms, keep the general public updated on the latest information using popular culturally appropriate media platforms, discouraging criminal punishments aimed at those who fail to follow protocols.

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