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COVID-19 AND PUBLIC MENTAL HEALTH: A CRITICAL REVIEW

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Abstract

The global population is feeling the effects of the COVID-19 epidemic. The effects of this pandemic have been felt on all levels of society, including the economy, people's health, and their mental state. As a result, it's becoming urgent to study the impact of the pandemic on people's mental health. With this context in mind, we conducted a literature search of the PubMed database for information about the COVID-19 outbreak that was relevant to mental health. In order to synthesize the existing literature addressing mental health issues and stressors connected to the COVID-19 epidemic, a narrative review of the literature was conducted. In this investigation, we mostly used PubMed, ResearchGate, and Google Scholar to search for relevant articles. Anxiety, heightened anxiety rates, and sadness are only some of the psychopathologies that have been linked to pandemics. Both violent crime and eating problems are on the rise as well. Public institutions should prepare their health systems for the rising number of cases of mental illness. Appropriate preventive measurements should be taken with digital therapeutics.

Keywords: Anxiety, COVID-19, Public health, Post-traumatic stress disorder; Depression

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Introduction

In 2020, the world was hit by one of the deadliest pandemics in a century and a half. Hundreds of thousands of people are infected with this novel coronavirus every day, and thousands of them tragically lose their lives. Mas-Coma, Jones, and Marty (2020). Wuhan, China, saw a rise in unusual cases of pneumonia in December 2019; the World Health Organization (WHO) designated this outbreak coronavirus disease 2019 (COVID-19) on February 11, 2020. Anand *et al.,* (2020). Influences the respiratory system of humans, often resulting in anything from a mild cold to more serious conditions like Middle East Respiratory Syndrome (MERS) or Severe Acute Respiratory Syndrome (SARS). It was reported that (Sohrabi *et al.,* 2020). Almost 110 million confirmed cases and almost 2.5 million deaths at its peak show that it has had a global impact. "(Gostin, 2020)" This epidemiological crisis has resulted in an estimated 219 million illnesses and 4.55 million deaths as of September 2021. Despite this, approximately 5.76 billion doses of the vaccine have been delivered and 2.37 billion citizens or 30.7% of the world's population have been vaccinated. (Mathieu *et al.,* 2021). The next few years will go down in history as the era of COVID-19. So far, data point to an increasing incidence of cumulative cases and deaths and a decreasing trend in local infections. However, given that the vaccination process is slow and that 70% to 85% (Clemente-Suárez *et al.,* 2020) of the world's population needs to be vaccinated to maintain herd immunity, the pandemic, its impacts, and restrictions are likely to continue until at least 2023. (Charumilind *et al.,* 2020). It will continue through the third quarter. Concerns about the public's mental health have prompted the implementation of stringent measures of control and containment, which are necessary for bringing them under control and maintaining the current decreasing trend in cumulative instances. As predicted by (Clemente-Suárez, 2021). Comparing the corona pandemic to past epidemics like severe acute respiratory syndrome (SARS) and the Ebola outbreak of 2014, we can see that extreme containment, isolation, and social distancing have resulted in alterations in mental health (Venkatesh *et al.,* 2022). The quality of life, anxiety, sadness, and disturbed sleep all seem to be on the rise. According to the research (Grattan *et al.,* 2011). According to Noy and Doan, COVID-19 will cost the globe more in 2020 than all natural disasters in the previous two decades put together. This has been the longest instance of solitary confinement ever recorded. (Choukér and Stahn 2020), with rapid changes in citizen lifestyles which is associated with domestic violence [Usher *et al.,* 2020), substance abuse [Volkow N. D. 2020], reduced physical activity (Tison *et al.,* 2020), worsening eating habits (Rodriguez-Besteiro *et al.,* 2021), and a more passive and sedentary lifestyles (Bendau *et al.,* 2021) were marked up. These are all psychological health risk factors (Clemente-Suárez *et al.,* 2021. Psychiatrists across the world are aware of the measures that must be taken to prevent the spread of COVID-19 (Liu *et al.,* 2020a) and the demands of specific populations (Yang *et al.,* 2020). Additionally, it is important for them to identify gaps in the current literature that may need to be filled in the future with increased clinical experience and additional research. This review article was

written to bring together all the research done so far on the mental health effects of the epidemic.

Search engines and strategies for identifying studies

Scholarly papers and other primary sources were employed in the literature search, with secondary sources such bibliographic indexes, databases, and websites being consulted. MeSH-compliant keywords for the following databases: SciELO, PubMed, Science Direct Scopus, Embase, Web of Science, Coronavirus 2019, COVID-19, 2019-nCoV, SARS-CoV-2, Mental Health, Mental Pathology, Stress, Psychology, Psychiatry, Depression.

The following exclusion criteria were used:

We included all papers that matched our scientific methodological standards and impacted one of the subsections of this article: mental health and COVID-19. (i) Studies using older data not connected to COVID-19/pandemic; (ii) unsuitable topics not relevant to the major emphasis of the current review. In the end, 70 publications met the criteria for further examination and use in the research.

New circumstances, new stressors

Some of the greatest social and psychological strain on modern civilization can be traced back to the COVID-19 pandemic. COVID-19-related stressors include loss of daily routine, confusion, anxiety (Brooks *et al.,* 2020) reduced physical activity (Rogowska, Kus´nierz and Bokszczanin 2020) and sleep disturbance, heavy use of digital media, inconsistent diets. (Cellini *et al.,* 2020). When it comes to quarantine measures, people have had to stop contacting other people in different situations. This situation is especially detrimental for older people living in long-term care facilities (Eghtesadi, M. 2020). They experience deep isolation and become prisoners in their bedrooms. (Armitage and Nellums 2020). Which can lead to extreme loneliness puts people at risk for poor health, anxiety and depression. Another scenario of uncertainty and contradiction colliding with our habits concerns the modified courtesy protocol for biosecurity protocols previously reserved for healthcare workers. (Van der Westhuizen *et al*., 2020). The COVID-19 pandemic is associated with declining trust and credibility. (Li, Zhang and Niu, 2021).

The absence of jobs, the fear of losing them, or the uncertainty of not gaining them, is another source of stress in the face of the COVID-19 epidemic. To wit: (Kumari et al., 2021). Freelancers and event organizers have taken the most hit among the creative community's employment losses (Jesus, D.S.V. 2020). Rising unemployment is linked to suicides worldwide during the pandemic (Thakur and Jain 2020).

Manifestation of depression with associated risk factors

Patients suffering from depression often have pessimistic outlooks on life and tend to dwell on the past and worry about the future Specifically, (Dozois, D.J.A. 2021). These psychological effects may have origins in the immunological response to coronavirus, specifically the cytokine storms that occur during this process. Pathways of interaction between the immune system and psychopathological mechanisms that underlie psychiatric disorders like depression include neuroinflammation, alterations to the blood-brain barrier, invasion of peripheral immune cells into the central nervous system (CNS), decreased neurotransmission, the adrenal hypothalamic-pituitary axis (HPA), and microglial activation As of 2020 (Alpert *et al.).* It has been found that depressed symptoms are more common in women than in men. For example, (Lei *et al.,* 2020; Mazza *et al.,* 2020; Snderskov *et al.,* 2020). A number of studies have found that depressive symptoms are more common among people under the age of 40. To wit: (Huang & Zhao, 2020, Ahmed et al., 2020; Gao *et al.,* 2020). Being a student, in comparison to being employed or retired, was also revealed to be a significant risk factor for having more depressed symptoms. For example, see (González et al., 2020) and (Olagoke et al., 2020). In addition to living in an urban area, having poor self-reported health, experiencing high levels of loneliness, being divorced/widowed/single, having a low household income, living alone, being isolated, having a history of infections, experiencing property damage, losing a job, being childless, experiencing emotional stress or concerns about medical problems, being aware of the risk of losing a job, being exposed to COVID-19-related news, having a perception of vulnerability, having low self-efficacy, This is supported by a number of studies (Gao *et al*., 2020; González-Sanguino et al., 2020; Lei *et al.,* 2020; Mazza *et al*., 2020; ;Ozamiz-Etxebarriaetal., 2020;

Manifestation of anxiety with associated risk factors

There has been a dramatic increase in cases of mental illness since the beginning of the epidemic in 2020. Anxiety disorder symptoms have been established in a large percentage of the population a full year after the COVID-19 pandemic was declared (Santábarbara, *et al.,* 2021). Exacerbations of mild to severe mental diseases that negatively impact people's life have been linked to extreme settings, such as solitude. From occasional anxiety to more serious symptoms like sleeplessness, depression, and acute stress disorders (Adwas, Jbireal, & Azab 2019). But there are more variables that have led to increased dread throughout this time. For instance, the rapidity with which the virus is spreading and the accompanying uncertainty about the disease's long-term prognosis. The result is a downward spiral into despair, anxiety, and gloom. "(Roy *et al*., 2020)"

Anxiety often co-occurring with depression. (Choi *et al.,* 2020). Some predictors of depressive symptoms relate to anxiety symptoms are younger age (<40 years), lower educational attainment, self-reported worsening health status, higher loneliness, female sex, divorced/widow status, isolation status, and concerns about contagion, presence of chronic illnesses, urban living, and presence of certain physical symptoms . (Ahmed *et al.,* 2020; González Sanguino *et al.,* 2020; Gao *et al.,* 2020; Mazza *et al.,* 2020; Huang and Zhao, 2020; Lei *et al.,* 2020; Moghanibashi-Mansourieh, 2020; OzamizEtxebarria *et al*., 2020; Ozamiz-Etxebarria *et al.,* 2020) Furthermore, exposure to social media or frequent exposure to news/information related to COVID-19 was positively associated with anxiety symptoms (Gao *et al.,* 2020; Moghanibashi-Mansourieh, 2020). There was also a correlation that the longer the isolation period, the higher the risk of anxiety symptoms. Intuitively, a history of contact with COVID-positive patients or objects can lead to more anxiety symptoms (Moghanibashi-Mansourieh, 2020). Manifestation of Post-Traumatic Stress Disorder (PTSD) and associated risk factors.

According to the DSM-5, PTSD is a stressful stimulus that produces intense feelings of fear, helplessness, as well as intense threats to life and physical integrity (Friedman *et al*., 2011). By definition, therefore, COVID-19 fits the definition of a traumatic event. There are several stimuli in this line that can cause PTSD due to COVID-19: Individuals suffering from severe COVID-19 symptoms and potentially at risk of death, those who have lost a family member, close friend or relative, Individuals who have experienced the virus and its devastation firsthand and are chronically exposed on the front lines (e.g., first responders, journalists, doctors and medical staff) (Cheng *et al*., 2020). A review of past global pandemics suggests that mental health symptoms and disorders such as anxiety, insomnia, depression, and PTSD are likely to manifest in populations. A systematic review of past pandemics, MERS, including SARS, and now COVID-19, found that between 14% and 61% of those infected had severe psychiatric and neuropsychiatric problems during their illness and 14.8%-76.9% continue to have these problems after overcoming the disease (Rogers *et al.,* 2020).

However, PTSD symptoms vary greatly depending on the individual, psychometric profile, lived experience, and level of exposure. Some people may be more sensitive to the emotional effects of the pandemic than others. Women and younger age groups often have higher levels of stress compared to men and older adults. Other predictors of higher stress levels are being a student, more days in lockdown, being unemployed, needing to go to work, someone you know has the virus, and chronic illness, Self-reported deterioration in health and presence of certain physical symptoms (Wang *et al.,* 2020; Samadarshi *et al.,* 2020; Mazza *et al.,* 2020).

In this regard, early monitoring and care are essential. There are three main manifestations of PTSD's effects on a person's life: Disconnection from feelings, depersonalization, and overexcitation (irritability, difficulty sleeping or rapid agitation, difficulty concentrating) (Restauri & Sheridan 2020). However, symptoms may not appear for at least a month or even years after the stressful event, a fact that limits diagnosis. Diagnosis is made within 1 month of the traumatic event and is an acute stress disorder associated with intrusion, dissociation, bad mood, avoidance, and arousal symptoms. After a stressful event, the incidence of acute stress disorder is between 5% and 20%. Importantly, intervention at this early stage can slow progression to PTSD(Uptodate.com).

Protective elements towards signs of mental issues

Some research has found characteristics that shield people from mental illness symptoms during the pandemic in addition to pertinent risk factors. The public's levels of worry, tension, and depressive symptoms were found to be lower when authorities promptly disseminated up-to-date and correct COVID-19-related health information (Wang *et al.,* 2020a). Additionally, employing infection prevention strategies including routine hand washing, wearing masks, and minimizing person-to-person contact significantly predicted lessened emotional distress during the pandemic (Wang *et al.,* 2020b). According to one of the research, participants who received more social support and had more downtime during the pandemic exhibited lower levels of stress (Zhang *et al.* 2020).

Discussion

Problems with mental health in the general population should be treated as a second epidemic. The current pandemic situation and associated constraints, according to a number of academics, are expected to last at least through the third quarter of 2023 (Clemente-Suárez, Suárez, & Suárez, 2021).

In this review, we looked at how the pandemic of COVID-19 affected people's mental health and what factors might have contributed to it. According to recent studies (Huang *et al*., 2019; Lim *et al*., 2018), the overall population is experiencing a higher rate of psychiatric disorder symptoms than before the pandemic. Varied measurement scales, varied reporting practices, and perhaps international and cultural variables may all contribute to the discrepancies in prevalence found among research. For instance, in some research, all subjects were reported to have scores over his cutoff point (moderate to severe symptoms), but in others, the range was more nuanced According to (Moghanibashi-Mansourieh, 2020). The severity of the epidemic, national economy, government readiness, availability of medical supplies/facilities, and proper transmission of COVID-related information all play a role in creating regional differences in public mental health during disease outbreaks. The public's emotional response was also affected by the stage of the outbreak in each area. When calculating the emotional toll of the coronavirus epidemic, it's important to factor in how long people experience psychotic symptoms. Psychological reactions to stress and trauma that occur quickly after they occur can be adaptive and even evolutionary important Gilbert (2006); Brosschot *et al.* (2016); Yaribeygi *et al*. (2017). Long-term psychological effects of the COVID-19 pandemic may require post-pandemic follow-up investigations. The only thing reported on in the media during a pandemic is death and disease. Microconcepts inspired by the idea of unexpectedly negative news were tested during COVID-19. The phases of mourning were quite useful in classifying how people responded to the news of the pandemic. Kubler-Ross's five stages of mourning are depicted in Figure 1 with the stages of the COVID-19 epidemic (CoViD-19 Messages Reveal Grief Cycle) (Public Relations Daily, 2020).

Mental health implications in specific population groups

It is well-known that those who already suffer from mental illness are often the hardest hit during an epidemic (Chatterjee *et al*., 2020). Reasons include stigma, the potential for infection, and the general disregard for mental health issues. During the COVID-19 pandemic, people with mental illness are especially vulnerable because to factors such as cognitive impairment, low risk awareness, diminished efforts to individually protect patients, and crowded psychiatric hospitals (Yao *et al.,* 2020).

They may be especially vulnerable because of the fear of social distancing discrimination and social isolation brought on by the effects of rigorous lockdown restrictions. Potential fallout from the COVID-19 epidemic is emotional reactions.

Frontline workers around the World: Include frontline workers, including doctors, nurses, community health workers, health workers, police officers, and other volunteers, make impossible decisions and work under extreme pressure. Working under stressful conditions with limited resources not only impacts individual and family

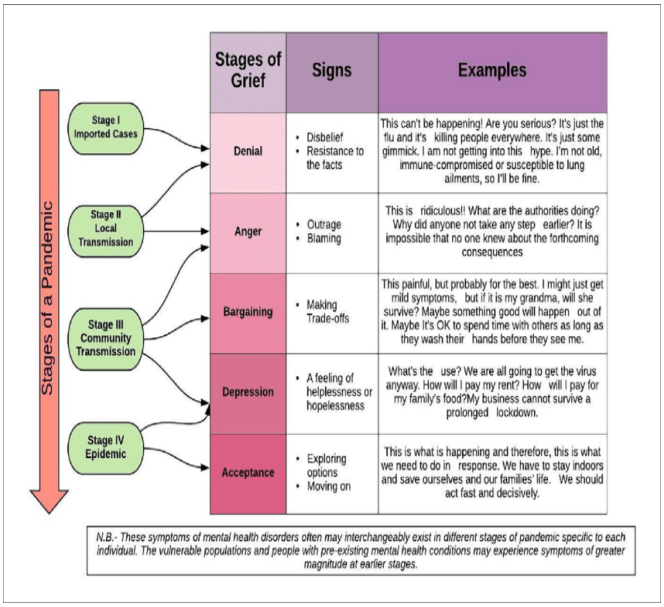

Figure 1: Phases of the COVID-19 pandemic were described using the Kubler-Ross model of stages of grief

Lives, but also damages morale and causes mental health problems. Depression, PTSD, and suicidal ideation are just some of the mental health issues that may be exacerbated by these symptoms. The research is in (Cheng *et al*., 2004; Duan & Zhu, 2020; Greenberg *et al.,* 2020). Infants and the elderly: For young children, the elderly, and the socially isolated, life's sudden and abrupt shifts can be extremely perplexing and challenging to adapt to. Children's mental health can be negatively impacted by factors such as school closures, outdoor activities, and isolation. The elderly population in India is more at risk for contracting COVID-19. Over half of those over 60 have multiple medical conditions that increase their risk. Anxiety, worry, and rage are some of the mental outcomes of being in such a group. Older people experiencing cognitive decline, dementia, social isolation, and loneliness may find the effect particularly taxing on their mental health. Furthermore, the disease course is typically more severe in the elderly, leading to increased mortality. (MOHFW, 2020).

Different Strategies used to reduce symptoms of mental disorders

The involvement of COVID-19 in the exacerbation of psychiatric illnesses is substantial (Pfefferbaum & North., 2020). It is also possible for individuals to take steps toward better mental health. In the case of children, limiting their exposure to screens can help us give them accurate knowledge while shielding them from unsettling headlines. Take part in some indoor activities that will both challenge and reward your mind. Determine the child's emotional requirements and work to alleviate their worry. Find a mechanism for them to maintain contact with their pals. Establish a regular study time at home. Depression and stress in the elderly can be effectively alleviated and prevented via regular exercise and a balanced dietary pattern. Carek *et al*. (2011), Molendijk *et al*. (2018), and Lassale *et al.* (2019) all provide supporting evidence. The stress of being alone during quarantine can be reduced by keeping in touch with loved ones through phone calls or video chats. For example: (Hwang et al., 2020). It's also crucial to only get medical advice from licensed doctors and only read news on the COVID-19 outbreak from reputable sources.

Conclusion

This meta-analysis looked at how people felt during the COVID-19 pandemic and what factors contributed to their anxiety. Recent contextual stressors, such as the COVID-19 epidemic, have been shown to have detrimental effects on the emergence of depression, anxiety, and post-traumatic stress disorder. Negative psychological symptoms have been found to be very common in research. Politicians in high places need to get their healthcare systems ready for a rise in mental illness.

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