Psychiatric Issues After COVID-19

6

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6.1 Introduction

The emergence of COVID-19 infection caused by SARS-CoV-2 is a catastrophic humanitarian crisis which may have widespread and long-lasting psychological effects [1]. It is expected that the resulting psychological distress experienced by different subgroups of the population is likely to be different based on their vulnerabilities. As the COVID-19 pandemic has progressed globally with repeated upsurges, the psychological impact has also been increasingly seen in vulnerable groups like healthcare workers, individuals in quarantine, and patients with chronic medical and psychiatric conditions [1]. Although the literature available on long-term impact is limited at present, there are preliminary indications that COVID-19 can produce long-term psychiatric sequelae.

6.2 Experiences from Past Coronavirus Outbreaks

Initially, the concerns regarding the psychiatric sequelae of the COVID-19 were based on the findings from outbreaks caused by other coronaviruses in the past [2]. It has been well documented that a patient with respiratory viral diseases can have both acute and long-term psychiatric sequelae [3]. There have been pandemics from other coronaviruses like SARS-CoV-1 in the past, for which the long-term effects on mental health have been well documented. Although extrapolation of these findings to the current situation is difficult, these can serve as useful

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guiding principles for planning mental healthcare services. Psychiatric symptoms and disorders like post-traumatic stress disorder (PTSD) or its subsyndromal symptoms, anxiety, and depression have been documented in the patients, healthcare workers, and general population during previous coronavirus outbreaks, both at the time of pandemic and for variable durations afterward up to 3 years post-pandemic [4].

6.3 Mental Health Problems After COVID-19

Currently, published literature on the psychiatric sequelae in the post-COVID-19 illness phase is sparse, although insomnia, delirium, depression, anxiety, and PTSD have been commonly reported in the acute and convalescent phase [2]. A few studies have reported high rates of insomnia and symptoms of PTSD, anxiety, and depression after a duration of 1 month post-COVID-19 infection [5, 6]. There have also been suggestions that coronaviruses can lead to psychopathological sequelae either through direct infection of the central nervous system or indirectly mediated through the immune response it generates [7]. Coronaviruses are neurotropic, inducing neuronal injuries and leading to neuroinflammation, potentially causing neuropsychiatric manifestations [8, 9]. Also, studies have found that in addition to the increased risk of psychiatric outcomes associated with COVID-19 infection, the incidence was greater in patients who required hospitalization and significantly higher in patients requiring intensive care management [10]. The risk of having anxiety and depression remains consistently elevated even after 3–6 months of COVID-19 infection, and probably even beyond, along with an elevated risk of insomnia, psychosis, and substance use disorders [10]. Another large study found that a diagnosis of COVID-19 was associated with an increased incidence of having first psychiatric diagnosis within 14–90 days, especially for anxiety disorders, insomnia, and dementia. The same study also found that a psychiatric diagnosis in the previous year was independently associated with an increased incidence of COVID-19 diagnosis [11]. In addition, factors like poor socioeconomic status, loss of employment, limited access to essential supplies, special support needs, duration of lockdown, fear of infection, inadequate information, comorbid medical conditions, and advanced age could all be possible determinants of post-COVID-19 psychological sequelae [12].

Table 6.1 shows the high-risk groups for developing mental health problems post-COVID-19 pandemic.

The COVID-19 pandemic has resulted in employment losses for many workers in the private and unorganized sectors. Financial loss because of quarantine has been shown to produce negative psychological sequelae that can be long-lasting [13]. Evidence also suggests that the financial loss during quarantine can be a risk factor for subsequent development of symptoms of psychological disorders, [14] anger and anxiety [15], even months after the crisis is over. Financial and job losses in the post-COVID-19 period can also lead to an increase in the cases of domestic violence against women as the perpetual cycle of domestic violence is fuelled by

Table 6.1 High-risk groups for mental health problems post-COVID-19 pandemic

• Those with loss of immediate and long-term employment
• Women, children, and adolescents
• Senior citizens with/without special needs
• Homeless individuals with/without psychiatric illnesses, poor social support
• Lower socioeconomic status
• Persons with disabilities
• History of severe mental illness
• Frontline workers, including health professionals
• Life-threatening chronic medical conditions like cancer, chronic renal failure, liver diseases, asthma/chronic obstructive airway disease, immunocompromised individuals

factors such as low socioeconomic status, lesser wages, poor living conditions, a high number of children, ongoing pregnancy, alcohol, and other substance abuse [16]. This phenomenon has been described as a "pandemic within the pandemic."

Children and adolescents have experienced disruptions in their regular schedules since schools and other everyday outdoor activities were suspended for a long time. This may result in various mental health issues, including anxiety, fear, worry, depression, difficulty sleeping, and appetite changes [17]. The experience of going through quarantine, isolation, or the death of a parent can further increase the chances of developing mental health issues in children and adolescents. Children with various physical and mental disabilities are especially vulnerable to developing these disorders as social isolation, economic hardships, and worsening physical and mental conditions of the parents and caregivers worsen the living condition of children with special needs or those living in abusive environments [17].

Elderly individuals, patients with chronic medical and psychiatric conditions, persons with disabilities, children, and other vulnerable subgroups are likely to depend on others for having an adequate basic supply of food, water, and other essentials. Having inadequate supplies of essentials can be a continued source of frustration [18] in the affected population and is persistently associated with anxiety and anger even at 4–6 months after quarantine [15]. These individuals, and patients suffering from chronic medical and psychiatric conditions, are also more likely to experience difficulties in their regular medical care, including getting prescriptions and regular supply of medications [18], compromising them further and leading to relapses of the medical and psychiatric disorders. Many people who are dependent on nicotine or alcohol or who have other psychoactive symptoms may experience acute withdrawal during the lockdown phase followed by worsening in the subsequent duration. There is also some evidence to suggest that a history of psychiatric illness is associated with persistent anxiety and anger even after 4–6 months post-infection [15].

Healthcare workers may experience high psychological distress during the pandemic, which increases the likelihood of developing post-COVID-19 psychiatric sequelae. Poor working conditions combined with a lack of safety equipment and management protocol lead to increased chances of high-risk exposure necessitating quarantine, and/or getting infected. A history of quarantine in healthcare workers is

Table 6.2 Risk factors for developing anxiety and depression

• Living alone
• No children or ≥ 2 children
• Female gender
• Current medical/psychiatric illness
• Poor sleep quality
• Higher perceived stress
• Lacking knowledge of pandemic
• Impact on daily life
• Poor social support
• Impact on income
• Frontline workers

the most important predictor of developing acute stress disorder, PTSD, low mood, anger, exhaustion, anxiety, insomnia, irritability, poor concentration, decreased work performance, and reluctance to work or considering resignation [19, 20]. Quarantine also predisposes to development of PTSD and alcohol dependence in healthcare workers even after a long interval [20]. In addition, the severity of the symptoms of PTSD may be increased in the quarantined healthcare workers as compared to the quarantined individuals from the general population. They are also more likely to report greater stigma, loss of income, and avoidance behaviors in addition to greater fear, anger, frustration, sadness, worry, isolation, and helplessness post-quarantine. Healthcare workers are also likely to be more concerned about spreading the infection to their family members and to others in the surroundings [21]. There is emerging data to suggest that the healthcare professionals working in COVID-19 areas have significantly higher rates of depression, anxiety, and somatic symptoms than those working in non-COVID-19 areas in addition to the use of maladaptive coping strategies to cope with the resultant stress [22].

Table 6.2 enumerates several risk factors of developing anxiety and depression following COVID-19 infection [4].

6.4 Death, Dying, and Bereavement Issues

COVID-19 pandemic is expected to have a significant impact on the experience of death, dying, and bereavement. Studies from the previous pandemics have shown that a pandemic not only causes disruption directly due to death but also impacts and disrupts the social norms due to isolating measures, rituals, and mourning practices leading to potentially increased risk of developing complicated grief in the survivors [23]. The need for physical barriers and isolation measures, along with the use of personal protective equipment by family members and healthcare workers, limits the physical contact and number of visits from family members, causing loss of usual social support [24, 25]. Additionally, in case of loss due to death, the family members cannot support each other due to similar reasons [26]. During the

pandemic, scarcity of hospital beds for admission also compromised the autonomy of the individuals regarding decisions about preferred place of death [26] and participation of others in decision-making process. Also, there was a disruption of the usual rituals and practices observed following death [27]. Thus, all these factors, along with the added risk of having multiple deaths in the same family, are likely to increase the risk of complicated grief in the survivors.

6.5 Prevention

To prevent the long-term impact of the pandemic, the resilience of the population is an important determinant. The resilience to the stress depends on several determinants, including socioeconomic condition, age, comorbid medical conditions, preexisting mental health conditions, length of the quarantine, food security, individual coping strategies, family support, and special needs [12]. Individually, establishing new routines, exercising regularly, and spending quality time with the family can help deal with the immediate stress and cope with the long-term effects of the pandemic. Judicious use of social media with information from reliable sources only can prevent information overload and avoid becoming overwhelmed with anxiety about the future course of events [12].

As multiple waves of the pandemic continue, the duration of the quarantine should be kept as minimum as possible based on the scientific reasoning of the incubation periods, as longer durations are associated with more negative psychological consequences [28]. Also, there should be provisions for free access to essential information regarding the pandemic through easily accessible means to prevent catastrophic appraisals by the affected individuals. Provisions for early identification of more vulnerable individuals like the elderly, people with high-risk comorbid medical conditions, and those with special needs can help in early treatment. Essential legislation and welfare schemes can protect the employment of the workers during lockdown period along with financial assistance. Similarly, assistance to seek work early in the post-COVID-19 phase can also help reduce the long-term psychological sequelae.

Healthcare workers should have clarity of their respective roles in the post-COVID-19 phase, including preparation for future waves of pandemic, and should be supported by means of adequate protective equipment and special accommodation near the workplace during the acute phase, which can alleviate their fear of spreading the infection to the family members. Legislation may be essential to protect the healthcare workers from stigmatizing attitudes in society. Organizational support is highly protective of mental health during infectious disease outbreaks, and staff should be supported in all possible ways to keep their morale high [29].

Telemedicine has emerged as an important vehicle of health services delivery in the COVID-19 pandemic. Telemedicine facilities should be encouraged, and helpline numbers should be established for people in distress as part of capacity building in the healthcare infrastructure. The release of telemedicine guidelines by the Board of Governors of Medical Council of India along with the release of

Telepsychiatry Operational Guidelines 2020 by the Indian Psychiatric Society, the Telemedicine Society of India, and the National Institute of Mental Health and Neurosciences has improved the horizons for mental healthcare in India during the COVID-19 pandemic. This should be further strengthened to improve mental health services provision in the post-pandemic phase [30].

6.6 Conclusions

In conclusion, the long-term psychological sequelae of COVID-19 are likely to pose a significant challenge and additional burden on already limited mental health services, especially in low- and middle-income countries. Measures like simple and precise information, minimum necessary lockdown period, adequate supply of essentials, protection of employment, and financial assistance to the poor will go a long way in minimizing these long-term adverse psychological effects. Technological advances in telemedicine have a key role to play in mental health services delivery in the foreseeable future.

6.7 Take-Home Messages

- Protection and special provisions for vulnerable groups, including healthcare workers, should be a priority to prevent long-term negative psychological effects.
- COVID-19 pandemic is expected to have a significant impact on the experience of death, dying, and bereavement resulting in increased risk of complicated grief.
- Measures like providing simple and clear public information, minimum necessary lockdown period, adequate supply of essentials, protection of employment, and financial assistance to those in need can help reduce long-term negative psychological effects.
- Long-term psychiatric sequelae are likely to put an additional burden on limited mental health resources in low- and middle-income countries.

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