

# COVID-19'S LINGERING TOLL

Examining Mental Health Consequences in India

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## INTRODUCTION

**T**he experience of the COVID-19 pandemic has perhaps been the most traumatic period in collective living memory. The pandemic has brought about a seemingly unprecedented global crisis, causing significant disruptions in the way we live, work and interact with each other.

The pandemic has also had a significant impact on mental health. India experienced multiple waves of infections and deaths, resulting in widespread fear, uncertainty and distress. Fears of contracting the virus, losing loved ones, the lack of adequate mourning and rituals, isolation, spreading the infection, and financial uncertainties have further exacerbated this problem (Gopikumar, et al., 2020). All this is over and above the complex and emerging consequences of the infection itself in terms of long-lasting neuropsychiatric symptoms (Kumar, et al., 2021).

## LOCKDOWNS

One approach that governments used to contain the spread of COVID-19 was what has come to be called the 'lockdown'. Travel was curtailed; offices, schools and colleges were shut; and people were asked or ordered to stay home.

In India, a strict nationwide lockdown commenced on 24 March 2020. The impact of this on public health, and specifically on mental health, is something that we will only fully understand later, but even its immediate impact was significant. The lockdown—which lasted more than 12 weeks—induced fear

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and worry, resulting in significant effects on individuals, families and communities.

In an online survey conducted in March 2020 across 64 cities, approximately one-third of respondents reported a significant psychological impact during the first month of the lockdown (Varshney, et al., 2020). A six-month longitudinal study during the initial stage of the outbreak found a significant increase in the prevalence rates of depression, anxiety and stress (Sidhu, et al., 2022).

Disparities in access to testing and care had an emphatic and negative impact on psychological well-being. Furthermore, there was social insecurity in communities due to the spread of both fear and illness, and there have been reports of discrimination among family members infected with and dying from COVID-19.

A study using Markov modelling (which looks at the presence of symptoms and attempts to extrapolate from those) examined the spread of the disease to understand its psychological impact in the initial three months of lockdown. It assessed 891 respondents from 11 states and observed that 22 per cent of respondents had depressive symptoms, 15 per cent had anxiety symptoms and 27.5 per cent had both. Factors that predicted risk included being young, single or widowed, unemployed, with fewer years of education, having prior psychological symptoms, hypochondriac thoughts, fears of contamination and social contagion, as well as having prominent physical symptoms during the infection (Reddy, et al., 2020).

An online study conducted by the Indian Psychiatry Society received 1,871 responses, and almost 80 per cent of those surveyed reported feeling stressed and unwell. More than a third had anxiety symptoms and 10.5 per cent had depressive symptoms (Grover, et al., 2020).

Mass quarantine and isolation of the infected, a measure that many governments adopted worldwide, came with its own challenges. To understand the impact of quarantine, a socio-ecological model reviewed 74 studies and identified several risk factors, including youth, female gender, low income, fear of infection, poor sleep quality, reduced physical activity, increased sedentary behaviours and a lack of social support. Financial difficulties and stigma remained risk factors even after the quarantine period had ended. Good coping skills, exercise, leisure and recreational activities, the ability to maintain relationships using

social media, and the availability of mental health services emerged as protective factors (Rajkumar, et al., 2022).

Of course, most studies involved people who could be reached and sampled. Many vulnerable populations were not included in these surveys, including the destitute and unhoused, migrant labour, tribal populations and the institutionalised, who were, if anything, harder hit.

## **CHILDREN**

A study looking at the impact of the pandemic on the education, health and social life of 1,182 children of different age groups in and around Delhi observed that reduced schoolroom interaction and inefficient timetables contributed to significant dissatisfaction. As expected, sleeping habits, daily fitness routines and social interaction were found to significantly affect students' health conditions (Chaturvedi, et al., 2021). These effects were amplified in those from remote areas and marginalised sections, who, in any case, face enormous challenges in education (Kapasia, et al., 2020).

A review of 102 papers from across the world assessing the psychological impact of COVID-19 as well as associated quarantine and social isolation on young people found that emotional distress was quite common, as were varying levels of anxiety and depression symptoms, and these symptoms appeared to be more severe among females and older adolescents. Young people became less active, found it difficult to fall asleep, and spent more time 'on screen' or in other sedentary behaviour. This impoverishment in 'quality of life' is correlated with higher levels of anxiety and depression (Chawla, et al., 2021). These symptoms could perhaps be exacerbated by underlying vulnerability factors such as developmental age, educational status, pre-existing mental health conditions and economic disadvantage (Singh, et al., 2020).

On the other hand, some experts have suggested that the closure of schools may have had some positive effects, such as delaying the onset of substance use and allowing for increased parental bonding with children (Bruining, et al., 2021).

## **THE ELDERLY**

A small qualitative study assessed 22 persons in their early 60s and documented a range of psycho-social and behavioural effects

of the pandemic, especially fear and anxiety. Social isolation and being confined at home led to a sense of social boycott. Routines and habits were disrupted, and this was a source of distress and concern (Chakrawarty, et al., 2021). Social isolation also causes depression and anxiety in older adults (Robb, et al., 2020). The WHO had recommended mandatory self-isolation for older adults, but this intensified concerns about neurocognitive, autoimmune, cardiovascular and mental health issues.

During the lockdown in India, over 300 suicides were reported as 'non-coronavirus deaths' due to mental distress. A case study investigated five older adults who died due to suicide because of a relapse of pre-existing mental illness (Rana, 2020), demonstrating that elderly individuals with a history of mental illness were at higher risk during the COVID-19 pandemic.

Conversely, many elderly couples were resilient and showed good coping skills during the pandemic. A study of elderly couples living alone in Odisha found that they used four core coping strategies: risk appraisal, safeguarding against the infection, managing routine health care and emergencies, and pursuing mental and psychological well-being. Despite ongoing stressors, the couples used companionship and support from spouses, self-health literacy, virtual connectedness, community and organisational support, and engagement in creative leisure activities to manage their mental well-being. Self-health monitoring, physical exercise, spiritual practices, telephonic advice from physicians, and continuing previous prescriptions also helped (Mahapatra, et al., 2021).

Older people and those with comorbidities were clearly at higher risk of severe infection and death from COVID-19. Long-term care facilities such as nursing homes and rehabilitation centres provide care to this vulnerable population, especially in Western settings, where much of this data originates. Family visits were restricted in nursing homes as one of the first measures to mitigate the possibility of infection. An initial study from Ireland reflected these experiences from a caregiver perspective and reported that the absence of regular and meaningful contact with family was strongly felt by almost all respondents (Cornally, et al., 2022). Another study from Italy suggested that long-term care facilities did not provide adequate protection for older adults during the pandemic. In fact, it has been suggested that the greater

the number of elderly people living in care facilities, the greater the increase in both general mortality and COVID-19-related mortality (Amore, et al., 2021).

The COVID-19 pandemic disproportionately affected vulnerable people in care homes, with a high percentage of COVID-related deaths occurring in these facilities (between 19 and 72 per cent). This highlights the interdependence of the health and social care sectors, as shortages in health care have created obstacles in sheltering and providing for the most fragile individuals (Thompson, et al., 2020).

### **HEALTH CARE WORKERS**

The prevalence and correlates of mental health issues among health care workers (HCWs) in treatment settings during the pandemic was investigated in Karnataka. Of the 3,083 HCWs who completed an anonymous online questionnaire, symptoms of anxiety and depression were highest among those with frontline COVID-19 responsibilities, and significantly higher among those with clinical responsibilities than those with supportive responsibilities. Those reporting anxiety symptoms were more likely to be doctors/nurses/hospital assistants, older, female, unmarried, were less likely to be engaged in leisure activities, and had a history of receiving mental health interventions. They also reported increased alcohol use and suicidal thoughts after the onset of the pandemic. Participants with depression, in addition, often had family distress and hardly ever exercised (Parthasarathy, et al., 2021).

In a study of 450 doctors and nurses, almost a third to half reported psychological distress. Symptoms of stress, anxiety and depression were observed in 33.8 per cent, 38.9 per cent and 43.6 per cent, respectively. The clinical staff who had been exposed to COVID-care reported roughly double the morbidity of non-exposed professionals. Most of this group were worried about the health of their families, and secondly, their own health. The study suggests that exposure, uncertainty and fear of infection could be possible risk factors for psychological issues among this group (Jakhar, et al., 2021).

A recent meta-review of 40 systematic studies (data from 1,828 primary studies and more than 3 million individuals) estimated that more than half the participants developed

psychological symptoms. Anxiety, depression and stress/post-traumatic stress disorder were detectable in 14–56.5 per cent of the sample. Other mental health concerns reported include insomnia, burnout, fear, obsessive-compulsive disorder, somatisation symptoms, phobia, substance abuse and suicidal thoughts. Significant risk factors for developing these conditions included being female, being younger, and working as a nurse or frontline professional (Chutiyami, et al., 2022).

### **MIGRANT AND DAILY-WAGE WORKERS**

Census data in India from 2011 reported that there were 40.3 crore (403 million) workers in the country.<sup>1</sup> Of these, 175 million were migrant workers, employed in the informal sector. The impact of lockdowns on migrant and daily-wage workers has been significant and often devastating.

These workers often live wage-to-wage and depend on their daily earnings to provide for themselves and their families. Due to the lockdowns, many of these workers were left with no income and far from their homes. They struggled to afford basic necessities such as food, shelter and health care (Mamgain, 2021). With no transportation available, and no way to pay for it, they were left with few options.

A survey of 15 selected studies revealed that migrants faced a range of challenges during the COVID-19 pandemic, primarily due to being stranded because of lockdown measures. This resulted in poor living conditions, lack of income and limited access to medical care, leaving them vulnerable to physical and psychological illnesses. Social issues such as discrimination and attacks from local people also added to their difficulties (Jesline, et al., 2021).

One of the enduring images of the lockdown is of the lines of people walking back to their villages across the length and breadth of the country, strongly reminiscent of the *kafilas* of post-Partition refugees. As the world limps back to a new normal, many of these stories remain to be told.

It must be recalled that the population of India, as recorded in the Census of 1921, was less than the population in 1911. This was the only decade since census records began that showed a flattening of population growth in India. The Census of 2021 was not held and has been postponed indefinitely, so we cannot compare the current

population to that of 2011. Whether we have experienced a similar flattening of population growth, exactly a century later, cannot currently be surmised.

### **PERSONS WITH PRE-EXISTING MENTAL HEALTH CONDITIONS**

Stress has an intricate association with mental health. COVID–19 worsened pre-existing mental health conditions due to increased social isolation, reduced access to support services and limited opportunities to connect with others. The changing environment, risk of infection and reduced access to health services led to an increase in psychological distress, making people with pre-existing mental health conditions more vulnerable to relapse and deterioration in their condition (Murphy, et al., 2021). A study involving 2,734 psychiatric patients from around the world found that over half experienced a worsening of their pre-existing psychiatric conditions during the pandemic (Gobbi, et al., 2020). The National Centre for Mental Health in the UK conducted a survey with 2,869 participants aged 18–94 with histories of mental illness and found that 60 per cent of the participants reported worsening mental health (Lewis, et al., 2022).

A study from 109 psychiatric care centres in India found a significant reduction in psychiatric services, both in-patient and out-patient, during the lockdown. Most in-patient services in general hospitals were closed during the lockdown, as psychiatric beds were being utilised for COVID management. Despite some services continuing, there was a marked reduction in the proportion of patients seen, which affected the care of persons with mental illness (Grover, et al., 2020).

A meta-analysis of the relationship between mental illness, its treatment and the risk of COVID–19 revealed a significant link between the likelihood of having a diagnosed mental illness and higher COVID–19 mortality rates. This result is concerning for patients with severe mental illness on antipsychotics (Vai, et al., 2021). On the other hand, a growing body of literature also suggests that second-generation antipsychotic medications might have a protective effect against COVID–19 infection. For instance, a cohort study conducted in New York involving 1,958 admitted individuals with serious mental illness found some medications associated with a reduced risk of contracting the virus (Nemani, et al., 2022).

Specifically, the study showed that the use of paliperidone, a novel antipsychotic, had the strongest association with decreased risk of infection, possibly owing to its antiviral and anti-inflammatory properties (Girgis and Lieberman, 2021). Preliminary studies, especially a retrospective cohort study among 165 adult psychiatric in-patients in New York State, also found a significant protective association between antidepressant use and COVID-19 infection. Further exploratory analysis of individual antidepressants showed a lower risk of infection among people using fluoxetine and trazodone (Clelland, et al., 2022).

A randomised controlled trial explored the potential of fluvoxamine in adult out-patients to prevent clinical deterioration and found that patients treated with fluvoxamine had a lower likelihood of clinical deterioration over 15 days compared to those who received a placebo (Lenze, et al., 2020), but the subsequent replication of this trial yielded an inconclusive result.

## **SUICIDE AND MEDIA REPORTING**

The aftermath of the pandemic has also led to a concerning rise in suicide rates, as the psychological comorbidities brought on by the crisis have taken a heavy toll on people's mental health.

An analysis of 69 cases of suicide reported in newspapers highlighted the various factors that contributed to the increased number of suicide cases during the pandemic. The primary factor appears to be the fear of contracting COVID-19. The fear of infection may have been fuelled by media coverage of the pandemic, and the uncertainty and anxiety it caused.

The pandemic led to economic hardship for many people, resulting in job losses, pay cuts and a general decline in business activity. This financial stress may have contributed to feelings of hopelessness and despair. Loneliness and social isolation were also reported as factors that contributed to suicide in several cases. Other factors that contributed to suicide in the study include social boycott and pressure to be quarantined, COVID-19-positive status, work-related stress, inability to return home due to lockdown, unavailability of alcohol, and other personal and family issues (Dsouza, et al., 2020).

Suicide is a complex issue and multiple factors contribute to its occurrence. It has been demonstrated that exposure to media



coverage or fictional depictions of suicide can trigger an increase in suicide rates. On the other hand, it has also been demonstrated that media content that portrays help-seeking behaviours and positive solutions to problems can have a protective effect on suicide rates (Niederkröthaler, et al., 2010).

Therefore, media professionals and public health experts should be mindful of the potential effects of media content on suicide rates. The media has an important role to play in reporting responsibly and avoiding sensationalism or glorification of suicide. This should also involve providing resources and information about suicide prevention and mental health.

### **INTERVENTIONS DURING THE PANDEMIC**

An unanticipated effect of the pandemic was the untethering of therapy and counselling services from geography. Before the pandemic, tele-medicine in India was used only by a few centres such as the Schizophrenia Research Foundation in Chennai, the Postgraduate Institute of Medical Education and Research in Chandigarh, and the National Institute of Mental Health and Neurosciences in Bangalore (Ali, et al., 2020). This was initially conceived as a tool to access hard-to-reach populations, especially in remote areas.

With the advent of the pandemic, things changed dramatically, and all populations (and services) became harder to access. Tele-psychiatry was enthusiastically embraced during and after 2020. The high penetration of mobile telephony allowed for the spread of online counselling services. This access was made available in many regions and languages, often helping individuals with the necessary resources to cope with stress and anxiety, as well as providing information on healthy coping mechanisms and self-care practices.

Many telephone helplines were also organised. The Vandrevalla Foundation, a Mumbai-based mental health organisation, launched a helpline for individuals experiencing mental health issues during the pandemic. Existing tele-medicine services, like the ones mentioned above, were greatly expanded. A number of civil society initiatives, such as the Live Love Laugh Foundation, a mental health organisation founded by actress Deepika Padukone, launched a campaign to raise awareness about mental health issues during

the pandemic. In addition, many neighbourhood organised web-based distress response teams to help provide food and assistance of various kinds. Peer support programmes connected individuals with trained peers who had experienced similar mental health challenges. These programmes became increasingly popular during the pandemic as they provided a sense of connection and community to individuals. They were particularly beneficial for individuals who were unable to attend in-person support groups due to social distancing restrictions. Overall, callers expressed satisfaction and appreciation for the tele-counselling services provided by the various organisations.

### **INCENTIVES AND TRAINING**

Some specific interventions were designed to increase the adherence and management of persons with severe mental illness. Incentivising ASHAs, or Accredited Social Health Activists, worked to help ensure continuity of care for persons with severe mental illness. A study assessed the outcome of this in 184 adults with severe mental illness (SMI) in Jagaluru taluk, with whom follow-ups took place for a year (Sivakumar, et al., 2023). ASHA workers were incentivised to ensure follow-up consultations, address concerns regarding illness and medication side effects, and monitor medication adherence in the first such incentivisation scheme for mental health in the country. The results showed a significant reduction in disability, illness severity, self-stigma, and improved work performance at the one-year follow-up, highlighting the feasibility of continuity of care despite lockdowns and COVID-19 exigencies.

Preparing before deployment and receiving adequate training on COVID-19 also played a vital role in improving self-efficacy, better preparedness, and reduced anxiety among nurses during the pandemic (Dharra and Kumar, 2021).

### **COMMUNITY-BASED INTERVENTIONS**

Among the many grim stories that will be told of the pandemic, stories of positivity stand out in stark relief. Some of these stories are of communities that reached out to help others in distress when institutions of the state were largely missing. Implementing such efforts at the community level can be challenging, but the Mental Health Action Trust (MHAT) in Kerala has set a commendable

example in how it was able to continue to provide free long-term care to over 2,500 severely ill people in partnership with 50 community-based organisations and over 1,000 volunteers at the height of the pandemic. Clinicians, community mental health workers and volunteers all offered support remotely, and MHAT workers provided limited psychosocial interventions. The government's fire and rescue services facilitated the transfer of medications across districts (Manoj, 2020). Similar exemplary work was shown by several community-based organisations across the country.

These community-based efforts may be led by local organisations or non-governmental organisations with expertise in mental health and the resources to deliver support services. Such interventions may include providing access to mental health resources, organising support groups, offering remote counselling or therapy, and promoting self-care practices.

### **PROMOTING PUBLIC AWARENESS OF MENTAL HEALTH**

Videos, advisories and resource materials on coping with stress during COVID-19 and taking care of the mental health of vulnerable groups were made available on various web portals, both from India and worldwide.

Additionally, the government disseminated useful educational materials on mental health care for the elderly and children, as well as 'Mental Health in the times of COVID-19', which provided information on common mental health concerns, coping strategies and resources for seeking help.

Social media also played a dual role, serving as both an ally and a potential danger. The abundance of information available can lead to faster collaboration among scientific health care professionals. However, people often struggled to distinguish between accurate information and misinformation, as both were propagated quickly over social platforms.

### **UNEQUAL BURDENS**

This is not the first global pandemic to afflict humankind and will not be the last. One source of learning about pandemics has been work on what has been called the Spanish Flu of 1918. Perhaps better known as The Great Influenza, it is understood to have been

responsible for 10–20 million deaths in the Indian subcontinent—about half of the worldwide casualties (Chandra and Kassens-Noor, 2014). Interestingly, then, as now, the accuracy of reporting was subject to both scrutiny and controversy (Barry, 2004). In an earlier piece, two of the present authors discussed the similarities between the two pandemics and both the lessons learnt and forgotten (Sarin and Jain, 2020). While there were many similarities, it is interesting to note that psychological issues were not highlighted in 1918. It is difficult to imagine that the earlier pandemic did not impact mental health, so one way the COVID-19 pandemic has been different is in the recognition and chronicling of mental health issues.

The brunt of this pandemic, as with all disasters, has been borne unequally by different populations. So, existing societal fault lines, whether socio-economic, community or caste based, tend to become deeper, wider and more rigid. During the Flu the recorded death rate among Europeans, Parsis and Eurasians in Bombay was around 10 per 1,000, while that among 'low caste Hindus' was above 60. E. S. Phipson of the Indian Medical Service wrote about the impact on mortality during the pandemic in Bombay in 1918: '...those communities whose collective hold on life is known to be slight, suffered most during the epidemic, and the converse holds also' (1923: 517).

It has also long been clear that contemporary mental health systems do not give much importance to the social determinants of health, and that vulnerability and discrimination make it both difficult to access health systems and negatively impact outcomes. This pandemic, a century later, also displayed some stark and uncomfortable realities. Access to treatment, care and even the rites of death were determined by privilege and wealth. This glaring asymmetry, and the confirmation that access to health is not uniform, has amplified the scepticism and suspicion of public health services. This was evident in many settings all over the world (Gostin and Wetter, 2023), but given the fragmented and distributed nature of health care services in India, the long-term effects of this may be quite troublesome. At another level, it also produced a civic response, with hundreds of self-help groups, neighbourhood care, and food and medicine camps that tried to assert that 'we are all in this together'. It also made quite clear to the public at large the need to understand the 'science' behind such events.

Whether the community's memory of these difficult years leads us to energise our public health care, and the scientific work that should underpin it, will only become evident in the days to come.

In all of this, the tale of India's COVID vaccination also remains a story that needs to be told.



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### NOTE

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