

# Has the COVID-19 Pandemic Exacerbated India's Mental Health Issues?: A Narrative Review

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## Abstract

**Purpose:** Presently, the COVID-19 second wave is creating havoc with extensive surges in active cases and fatality in India. The country witnessed lockdowns, various prevention strategies including quarantine and social isolation for the first time in the history. Rippling impact on economy, socio cultural atmosphere, migration, sports, agriculture was observed. The drastic change affected mental health of people as well. The objective was to document pandemic's effect on the mental health of people of India. **Methodology:** "COVID-19", "mental health", "psychology", "lockdown", "quarantine" was searched in PubMed in different orders. The final selection constituted 17 articles. **Findings:** The review revealed symptoms of depression, anxiety, stress in adults. Quarantine children and young adults showed negative symptoms of mental health, health care professionals reflected high prevalence of depression, anxiety and stress and low Quality of Life (QoL). Gender, age, education, occupation, marital status, parenthood and income were found to be the predictors of mental illness. Insomnia, fear, worry other negative mental health symptoms were documented. **Research Limitations:** Review of literature in this area is restricted. So, all types of research articles were selected in the review. **Originality/Value:** The article recognizes the symptoms of mental health experienced, vulnerable population and predictors. Country's large size, diversity, constrained healthcare resources, makes it challenging to deal the pandemic including protection of mental health. The review would be constructive to researchers, psychiatrists, psychologists, policymakers. Together they could strategize holistic interventions for the problems.

**Keywords:** COVID-19; Mental health; Lockdown; Isolation; Depression; Anxiety

## Introduction

At present, the second wave of COVID-19 pandemic is creating havoc in India in terms of the number of active cases and fatalities. The feigned measures to control the rapidity of the wave have failed miserably. India stands second in the list of countries worldwide with 20.6 M total cases, 16.95 M recovered and 226 K deaths. <sup>[1]</sup> During the first wave, the effortstocurb the spread of infection included four phases of lockdowns, executing testing and treating of patients, contact tracing, restricting travel, quarantining citizens, closure of education institutes and cancelling large gatherings, festivities, sporting events, concerts. <sup>[2]</sup> The lockdown created a deleterious effect on business, agriculture, transport, sports etc. Further the pandemic's impact fared differently for various strata of people, pushing a high percentage of population below poverty line. It affected social life, economy, and occupation of almost all the sectors. <sup>[3-5]</sup> The stressed healthcare personnel worked around the clock, was exposed to risk of infection and got hard-pressed with the health system consequently as well. <sup>[6]</sup> With schools closed, children and adolescents became confined indoors, the restricted engagement in online teaching, with no scope for social interactions and prolonged use of digital gadgets created a negative effect on the psychology of children. <sup>[7]</sup> A research article revealed that the lockdown induced social

isolation, the environmentof uncertainty, fear, and suspicion would lead to collective psychological impacts such as loss of purpose in life, increased suicide rates, and non-COVID related diseases that would affect the mental health of the people in many countries. <sup>[8]</sup> India experienced measures of lockdown for the first time in history, the situations created mental distress, anxiety, depression, and other negative symptoms of mental illnesses in different sections of population. <sup>[9]</sup> These issues can reduce quality of life, cause a delay in seeking COVID-19 care, increase the risk of suicide/self-harm, weaken interpersonal and social functioning, poor work performance, and erratic adherence to COVID-19 related public health measures such as hand hygiene and social distancing etc. <sup>[10,11]</sup> As a result, it is critical to comprehend the effects of the pandemic on India's mental health. The review's aim was to document the impact of the pandemic on people's mental health, to document the probable predictors of the symptoms of mental illness. The article emerged from pooling evidence together which would

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be constructive to researchers, psychiatrists, psychologists, policymakers of this field.

## Review Methodology

A search of the PubMed electronic database was carried out. The articles were searched for the period from 1st January 2020 to 28th February 2021 irrespective of the type of the article. The keywords; “COVID-19”, “mental health”, “psychology”, “lockdown”, “quarantine”, “India” was used in different orders for search, 30 records were identified. After filtering 17 research articles were included for the review. The process happened with consensus from the authors. Articles on substance abuse and mental health, psychology of disabled people, mentally ill patients were excluded.

Out of the 17, (n=14) were original articles, that were cross-sectional and implemented online in context to the pandemic COVID-19. The remaining included a review article, two letters to the editors. The broad themes were recognized across the publications that are deliberated in the results section of the article. The precedence was given to original articles and briefly summarizing relevant themes from other articles.

## Manifestation of Depression, Anxiety and Stress among Adults, Children, Healthcare Professionals

An online survey at pan India level after the first lockdown in the month of March to April 2020 showed a higher prevalence of depression (25%), anxiety,(28%) and lesser percentage of stress (11.6%) in comparison with the other online study in the month of May 2020, which showed the frequency of depression (18.56%), anxiety (25.66%) and stress (21.99%).<sup>[12,9]</sup> Another study conducted in the second week of lockdown found males and females reporting mild stress, moderate anxiety, and mild depression, family affluence was negatively correlated with the above symptoms.<sup>[13]</sup> An original the longitudinal study observed participants for a period of two months after the lockdown reflected increased depressive symptoms, stress, and anxiety. Individual resilience was found to be negatively linked to negative psychological outcomes.<sup>[14]</sup> The DASS 21 the scale was used in the studies for assessing depression, anxiety, and stress. Further, Ahmad et al. found 25% of people with anxiety with the implementation of the Generalized Anxiety Disorder (GAD) Scale.<sup>[15]</sup> A (feel COVID) survey revealed high levels of anxiety in Indian adults as the majority were found to be engrossed with the thoughts of COVID-19.<sup>[16]</sup> Further, the online survey administered event-revised (IES-R) scale among Indian adults found a third of the respondents (IES-R score >24) with significant psychological impact. High stress was reported among people of the union territory of Jammu and Kashmir due to fear of loss of jobs and other damages.<sup>[17]</sup> A review by Indian psychiatrists corroborated the findings of the original studies, as it highlighted the major mental health issues to be depression, anxiety, and stress with other psychological disorders.<sup>[18]</sup> An evaluation of mental and physical workload among Indian women professionals working from home showed that mental wellbeing was moderately affected in 27.5% of participants and seriously affected in 27% of participants in an innovative study.

The increase in household chores had an effect on mental health.<sup>[19]</sup>

A research of 423 children aged 11 years to 15 years old who completed the pediatric symptom checklist-youth self-report short version discovered that 30.7% of them have psychosocial issues, with 25.2 percent having anxiety or depressive symptoms.<sup>[7]</sup> Quarantined children showed feelings of worry, helplessness, and fear (68.59%), (66.11%), (61.98%) respectively. The psychological problems were statistically significant in the quarantine group than in the non-quarantine cohort. Insomnia because of anxiety, loneliness, dullness (not statistically significant), and unhappiness was collective in the quarantine group.<sup>[20]</sup> A qualitative study documented vivid experiences of young adults about the impact of the pandemic on the mental health found anxiety related to the situations, about the safety of the loved ones, symptoms of depression, stress, and other negative emotions.<sup>[21]</sup>

A cross-sectional observational study reported that frontline doctors battling COVID-19 in outpatient departments, ICU, COVID-19 wards, screening, fever clinics especially of tertiary care hospitals representing all the geographic regions reflected a high prevalence of symptoms of depression (63.5%) and (45%) stress.<sup>[22]</sup> Further an assessment of mental health and Quality of Life (QoL) among Healthcare Professionals (HCP) in India showed a large percentage of participants described symptoms of depression (92, 47%), anxiety (98, 50%), and low QoL (89, 45%).<sup>[23]</sup> Alternatively, a study on ophthalmologists showed (52.7%) of depression and anxiety and (14%) reported stress.<sup>[24]</sup>

## Socio-Demographic Factors, Work Triggers Associated With Depression and Anxiety

Sex, age, education, occupation status, marital status, parenthood, and income were all reported as factors linked to stress, depression, and anxiety.<sup>[9,12]</sup> Women, age >25 years, unemployment, entrepreneurs, private enterprises professionals, lack of formal education, single status, big families, having more than two kids were associated to augmented possibility of adverse mental health.<sup>[17,15]</sup>

Indians in the age of 36 years to 45 years and 46 years to 55 years were recognized with higher prevalence of depression and anxiety respectively. With increasing age, there was also a rise in the probability of stress, with a small decrease after 55 years.<sup>[9]</sup> Stress was significantly associated with marital status. Married, widow/separated were probable to have more stress symptoms. In comparison to student status, employment status was found to be substantially related to depression, anxiety, and stress, with being jobless, independent entrepreneur, or working in the private sector having a higher risk of having symptoms of mental illness. In contrast, the other survey found that employed and binge drinkers were likely to be depressed than unemployed and non-binge drinkers.<sup>[12]</sup> Monthly income was found to be associated with depression, anxiety, and stress in a significant way, with higher income 0.1 M being protective against negative mental health components. In relation to small households with two children, large households with three or more children were associated with a higher risk of depression. Concern towards family members getting infected posed greater

threat of the prevalence of symptoms of depression and stress. [9] Checking media and news less frequently were less likely to show symptoms of anxiety. Physical activity was found to be positive for mental health. [17]

Frontline clinicians working  $\geq 6$  hours/day risk factor for perceived stress, single status, and long working hours significantly contributed to depression. Single HCPs experienced high rates of combined depression and anxiety compared to married, workplace stressors were linked to a nearly 50% rise in the risk of combined depression and anxiety. [23] In children reasons for psychological problems was fear of contracting COVID-19, inability to attend school and meet friends. [7] Secondly, increased use of social media was observed among children with depressive and anxiety symptoms. Regarding the quarantine children, psychological problems were associated with the untoward incident at home unemployed status of parents, monetary loss, and unavailability of basic life needs. [20] Youths were worried because of concerns about transmitting the infection to others, belief about being COVID-19 positive. [15]

### Insomnia, Fear, Worry-other Negative Mental Health Symptoms

The review also highlighted other negative mental health symptoms including sleep problems, fear of catching COVID-19, illness, and social media anxiety were recorded by 12.5%, 37.8%, and 36.4% of participants, respectively. [25] Young adults shared a feeling of uncertainty, interpersonal stress with family members and close friends. [21] In another study, a few percent were feeling hopeless, and around 20% seemed to be having less fun, feeling sad or unhappy and a quarter was worrying a lot, and some were feeling down. [7] Adolescents were feeling stressful because of parental anxiety, erratic routines, increased family violence, and home confinement with little or no access to peers, teachers, or physical activity. [26]

### Discussion

The studies conducted at the background of pandemic induced lockdown brought into light stress, anxiety and depression among general population, HCPs, adolescents and children. Unexpected exposure to uncertainty, restrictions on movements, fear of the disease, feeling of despair, and endless exposure to news, discussions on social media could be the triggering elements for the negative symptoms of mental health. A total 17 articles were selected, out of which two assessed depression, anxiety and stress among the population by implementing the DASS. A higher prevalence of depression and anxiety was found during the first lockdown than in the subsequent period. Two studies documented higher anxiety with persistent thoughts of the pandemic; even stress was found to be related to unemployment and other losses. Two studies on children discussed the psychological problems experienced during the pandemic and in quarantine. A study on young adults illustrated detailed encounter about impact of the pandemic on mental health. Three studies on HCP in India revealed a high prevalence of depression, anxiety, stress, and poor quality of life. Gender, age, employment status, home atmosphere and other factors were found to be the influential factors to the negative symptoms of mental health.

### Depression, anxiety and other symptoms of mental illness

The findings of the study was lower than a study conducted in the general population of Italy with 33.3%, 25% and 35.9% showing stress anxiety and depression with the implementation of DASS-21. [27] However, 16.5 % reported moderate to severe depressive symptoms, 28.8% reported moderate to severe anxiety symptoms, and 8.1 % reported moderate to severe stress levels, comparable to China. [28] Nonetheless, a study of people in Vietnam who were subjected to a national partial lockdown found a low prevalence of depression (4.9%), anxiety (7.0%), and stress (3.4%). [29] At the IES-R, one-third of respondents with significant psychological impact, in comparison to a study in Italy which showed 13.9% appeared at risk of developing. Post-Traumatic Stress Disorder (PTSD). [27] Most Vietnamese participants showed normal levels of stress caused by COVID-19 (74.3%) with the IES-R score was  $16.3 \pm 13.3$  as compared to India which was  $>24$ . [29]

In a study on children, 30.7% were found to be having psychological problems, out of which 25.2% showed anxiety and depressive symptoms much lower than Brazilian students which reflected moderate to severe 49% stress, 39% depression, and 33% of anxiety. [30]

In China, 22.3% of youth had scores indicative of clinical depressive symptoms, and higher levels of anxiety symptoms. The symptom levels were higher after COVID-19 than previously reported. [31] In another online survey, the (PHQ-9) and the (GAD-7) revealed a higher prevalence of depressive symptoms which was 43.7%, anxiety symptoms 37.4%, and both depressive and anxiety 31.3%. [32] The present study revealed anxiety and depressive symptoms in youths as well. But the study had used qualitative methods and had not administered any scale for the measurement of the symptoms.

The effects of quarantine on children of Spain and Italy found emotions of boredom, irritability, restlessness, nervousness, loneliness, uneasiness and worries similar to present study's findings. Significant finding was stress in parents was related to a higher prevalence of emotional and behavioral disturbances in their children. [33] A review on 63 studies recognized that social isolation and loneliness increased the risk of depression, detrimental for future mental health similar to the study's findings. [34]

Indian HCP showed a very high percentage of depression, anxiety, and stress with low QoL in contrast to Italy and Spain. In Italian health staff, the prevalence of mild to very serious symptoms was found to be 8% for depression, 9.8% for anxiety, and 8.9% for stress. [35] Another study showed that healthcare workers presented higher levels of psychiatric symptoms than the general public in Italy. [27] The results revealed higher percentages of extremely severe or severe anxiety and stress level than depression. Furthermore, moderate depression, anxiety, and stress (with percentages close to 20%) can be observed among health care professionals of Spain. [36]

It needs to be stated that mental health in any epidemic situations is dependent on evidence, media updates, the fatality rates, infection rates and the government's strategies to prevent

and control the epidemic. The study of HCP from Maharashtra showed a high prevalence of anxiety as it is one of the epicenter's of the epidemic in India with high case-load with constrained resources. [23]

### Factors associated with depression, anxiety and stress

Finding of females to be prone to psychiatric symptoms is consistent with other research studies as well. [27,35,36] Middle-age Indians were found to be having an increased prevalence of depression, anxiety, and stress increased with the age in contrast to a study in Italy. [27] However, a study on HCP proved that participants in the 26 years to 35 years scored higher on the DASS scale, elderly showing more burn out. [35]

In context to marital status, single, widow/divorcee were in more stress and anxiety similar to study in Vietnam. [29] Loss of job was a prominent causal factor for depression found in alignment with a study in South Africa. [37] In this study people with low income suffered depression, anxiety, and stress similar to study in Iran and the USA. [38] Physical activity found to be protective for mental health was corroborated in a study from Brazil. [30] Stressors at the workplace influencing depression and anxiety are highlighted in a review article. [39-42]

### Conclusion

The articles discussed in this review featuring the symptoms of mental illnesses in different population are just the tip of the iceberg in a vast ocean of real problems. Following the SARS-CoV-1 outbreak in 2003, evidence suggests that COVID-19 long term mental health effects will become apparent over time, necessitating holistic efforts not limited to psychiatry alone, but also from a healthcare system perspective.

At the moment, India lacks mental health programs to address looming mental health problems. A small step taken against the current complexities of the issue is the creations of insightful tips by a national institute working in mental health and neuroscience to ease the anxiety of people in quarantine, with a particular focus on yoga. In an emergency, helplines that operate in sporadic geographic areas are often of no use. There is a critical need to create and implement mental health initiatives that are time-sensitive, culturally relevant, and targeted at vulnerable communities. The healthcare workers such as Accredited Social Health Activists (ASHA) and volunteers could be trained in the implementation under the supervision of experts. Help lines, tele-consulting by psychiatrists, psychologists, training of community health workers in providing psycho social support to the larger population would benefit. The present study shows the importance of recognizing at risk populations (health care professionals, children, adolescents) and providing them with timely assistance becomes a necessity. Building resilience in the time of crisis is the need of the hour and Indian society as a whole should be conscious of its importance. It is not just maintenance of a threshold of well-being, but the pattern of behaviors that prompt individuals and communities to persist and move forward despite adversity. During problematic time such as loss of job, homelessness, witnessing death, loved one become ill, resilience in terms of seeking social support, sharing with others, coping uncertainty, or generating hope for

the future. Engaging in adaptive behaviors while struggling and while experiencing intense fear, anxiety, or grief is resilience that would help in coping with the losses.

Finally, expanding research activities to map the pandemic's effect on India's mental health is critical for developing therapeutic strategies to combat it.

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