

## Research Article

# A Narrative Analysis of Mental Health Effects during Coronavirus Pandemic (Covid-19)

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- Depressive symptoms

## Abstract

This study explores significant global evidence of major health crisis potential impacts and the factors influencing the mental health outcomes among the population during the pandemic of COVID-19. Preparation measures for a COVID-19 focus on rapid quarantine of social isolation and economic concerns have risen mental health considerations that become an integrated part of the pandemic outbreak. Its pandemic is covered around 212 countries. The USA is in highest position of death case 100,572 up to 5/27/2020. This created a lot of strain and fear; fear of falling ill and dying of being infected leading to heightened levels of insurmountable psychological pressure. This scrutiny attempt to assess the widespread outbreaks of COVID-19 on mental health professionals, healthcare workers and general population in association with adverse mental health sequelae like generalized anxiety disorder (GAD), depressive symptoms, insomnia, panic attacks, post-traumatic stress disorder, OCD, suicidal behavior, delirium, psychosis, harmful alcohol consumption, and drug use. There is a need for more evocative exploration to intensify awareness to address the potential psychological and behavioral risks that will remain elevated as long as the COVID-19 pandemic continues in the community. In conclusion, incessant surveillance of the subsyndromal mental health problems for outbreaks should be part of galvanized global action during the quarantine.

## BACKGROUND

Novel CORONA Virus (COVID-19), is an infectious disease similar form of SARS-CoV-2- impacting deadly globally. It is claimed that the origin of COVID-19 was in Wuhan, China in December, 2019. The societal impact of pandemic recrudescence is more than a medical phenomenon, causing inevitable mental health effects on the general population, medical practitioners, as well as on the infected individuals. Individuals with mental illness and witnessed medical practitioners may be particularly highly vulnerable to perceived menace followed by anxiety-related behaviors and other major health concerns. The increased wield of masks as appropriate protective measures [1], but an incongruous shortage of protective paraphernalia cause exhaustion and fret in a densely populated country like India. The unavailability of basic protection measures like masks and sanitizers endangers worldwide health workers [2], especially with a robust healthcare infrastructure of SAARC countries; India, Nepal, Bangladesh.

On 17th February 2020, Wuhan Wuchang Hospital in Hubei province reveal the severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2), as a possible emergency, whereas the infection spread across the globe in a rapid pace, on the 30th January 2020, the COVID-19 declared as a global health emergency [3]. According to Baud et al., 2020 the mortality

statistics are underestimated [4], however, the WHO report revealed the mortality rate to be between 3-4 % [3]. COVID-19 pandemic is an age-associated chronic condition, in support of this Centers for Disease Control and Prevention [5], reported the severe outcomes among those 85 years plus and 80% of all United States COVID-19 deaths were among adults 65 years or older. Older adults are more vulnerable to this pandemic but mental health impacts can be particularly strenuous for patients with cognitive decline or dementia [6]. In 2003, approximately a 30% increase in suicide in those aged 65 years and older; 50% remained anxious after recovery; and 29% of health-care workers experienced emotional perturbation at the time of SARS epidemic [7].

The knowledge & attitudes with sufficient resources typically influence the degree of adherence to manage or attenuate pandemics' effects on the perceived state of health. The resilience training program for medical practitioners in the preparation of pandemic seen as a way of protecting strategies like timely addressing of fears and worries among the medical team [10]; education and preparation; ensuring fairness and addressing ethical concerns; and ardent information on medical staff's redeployment to high-risk areas have incorporated at the outbreaks of the influenza pandemic and the exposed case of COVID-19. Despite this fact, the lack of sufficient resources to manage or attenuate pandemics has underlying effects on mental

health conditions [11], regarding the older people and frontline female nurses reporting extremely frightening prodromal include PTSD, depression, and grief are of abiding concern.

Corona virus is also known to be transmitted by mildly ill or pre-symptomatic infected persons, which pose a challenge to control compared to the Middle East respiratory syndrome (MERS) and SARS pandemics [12]. The results are consistent with studies on the SARS outbreak which demonstrated that 18%-57% of medical providers experiencing bewilderment at the onset, during, and after the affliction [13]. It is declared as a public health emergency by the WHO for every nation. Data as of May 27, 2020, this COVID -19 affecting 212 countries (except some small island countries) and confirmed cases declared-5,684,803, death case-352, 225, recovered- 2,430,603, active cases-2,901,975 (currently infected patients-2,848,878(98%), in mild condition and 53,097(2%), in serious or critical cases), closed cases 2,782,828 cases which had an outcome and 2,430,603 (8%) cases were recovered or discharged. The most cases are appearing surprisingly in the Europe-1,34,081 North-America-1,930,376, Asia-1,002,966, South America-33,981, Africa-3,613, Oceania- 124. The top five countries USA-100572, Spain-27,117, Italy-32,955, France-28,503, UK-37048 is in top five position. However, Nepal has lower experiences of the COVID-19 where only 4 death, total test -157,391 case throughout the country (date as of 27, May, 2020) Even though the rate is increasing slowly, while, only 41 cases registered, 9 cases active, recovered 4, and 0 death case throughout the country (till 4/21/2020).

The pandemic is possibly related to the interplay of both spread of the disease and the occurrence of mental disorders during and after the outbreak. An online survey reported approx. 80 % of candidates felt the need and 75 % agreed on the necessity for substantive advice from cognoscente and aficionado [14]. About 1/3rd participants having indecorous social behavior owing to the emotional and other psychological issues during this pandemic [15].

To prevent the transmission of pestilential diseases among individuals and communities, effective quarantine, isolation, and preventive social distancing as a public health measure [16,17]. The World Health Organization and Centers for Disease Control and Prevention recommend 14 days quarantine and social distancing, as, the COVID-19 pneumonia infection is believed to spread person to person primarily through droplets from the nose or mouth [18,19]. As in the 14th century, quarantine was one of the fewest known measures during the plague epidemics [5], but later on became as imperative components in addressing cholera and the current pandemic [20].

Mental health outcomes of quarantine and isolation reviews reported a high burden of mental health conditions among 33% of the participants [21], among general population [22], and healthcare providers [23]. Although quarantine and isolation are adopted for protecting the physical health from infectious diseases, it is essential to consider the mental health implications for those individuals who experience such restrictions. People quarantined in earlier outbreaks of infectious diseases and increased social isolation following the pandemic outbreak have reported a perfect storm to harm people's mental health. Distress and initiating fear of falling sick or dying is expected to

spark perpetual aggravating conditions in caregivers of affected individuals, which are expected to escalate day by day during this pandemic. Ultimately the outbreaks have the clinical outcome that can affect people with pre-existing mental illness and precipitating new psychiatric symptoms in those without mental illness.

Early identification and separation of suspected cases are the counteractive measures combating the pandemic [24], and have a large influence on the degree of adherence on the medical teams and the population at large [25]. Due to the exaggerated rumors of the infection, there are perpetuations of the psychological trauma of bereaved families and victims are claimed longer than the general public avoided them, and were socially isolated even after being cured [26]. A study done by Deblina Roy et al., 2020 found about 72 % of participants reported aggravating mental health issue include intemperately worried being contaminated, approximately 40 % of the participants were paranoid and 12 % of the participants had sleeping difficulty concerned with the personal protective measures of themselves and their close ones during the ongoing pandemic [15]. People with less access to health care [27], and homelessness have chronic mental and physical conditions [28], along with high rates of substance abuse [29].

## FRAMING MENTAL HEALTH RISK PROVOKE BY NOVEL CORONAVIRUS

In support of this generalized fear and impede behavior was common among the public during the early phase of the manifestation of SARS and 2014 Ebola outbreaks [30,31]. Besides, lots of studies have documented several psychiatric co-morbidities with innumerable emotional distress during the outbreaks of SARS and Ebola [32], such as posttraumatic stress disorder, anxiety-related symptoms caused by SARS [33], depression [34], psychomotor excitement, delirium, and psychotic symptoms [35], insomnia, and boredom cognate with quarantine following the infectious disease outbreaks and natural disasters like hurricanes, floods, and earthquakes [36]. Further, 25% of the general population will be affected by the intensity and content of encompasses of mental disorders affected by considering mood disorders and anxiety during their lifetime [37-39].

The perpetual stigma can rise the pernicious stereotypes which may lead to cognitive distress and long term mental health disorders that prevent the worldwide population from seeking immediate healthcare measures by which symptoms frequently become serious and long-lasting. Symptoms like suicidality, anxiety, and stigmatization impacted the wellbeing [40,41], that tend to be common in high-risk persons, especially survivors [42,43], affected individuals [22,23,40], frontline healthcare workers and professionals [44]. Worthwhile the delayed effects presume the prolonged suffering is also manifested as post-traumatic stress, physically expressed anxiety, abuse of alcohol, and other addictive substances, perhaps it needs more time to determine and illicit the abuse. Compared with the general population the clinicians showed a higher intrusion sub-score and medical practitioners face burnout after the cessation of the incidence of such infections [32], due to several reasons include long working hours, physical fatigue, risk of infection, and

separation from families [45].

## ANXIETY

People without having pre-existing mental health conditions also anticipate a considerable increase in Agoraphobia [23], helplessness symptoms, Similarly the swine flu pandemic evoked anxiety [46], following excessive worry about contracting Covid-19 among the public significantly. In due course identifying post-traumatic stress disorder and increased anxiety levels have been detrimental to pregnant women, parents, and children. For instance, those who have asymptomatic transmission can trigger or potentiate additional fear, anxiety, and mental breakdown. Various psychological vulnerability factors motivate people to practice prophylactic diet of vinegar, kimchee, turnips and smoking cigarettes, additionally, today's digital technology can bridge social distance and at the same time the ever-spreading rumors via social media that escalate the adjusted odds ratio [4], of trepidation and prompt to adopt false cures to protect themselves during the Covid-19 public health emergency. The pooled standardized mean difference for anxiety was 1.45 (95% CI 0.56 to 2.34) [48], and found a significant percentage of psychiatric symptoms among healthcare workers with 29.8% stress [49,50], 24.1% anxiety and 13.5% depression respectively [49]. In addition, study [51,52], showed that women were more likely to have anxiety than men and adverse maternal and neonatal outcomes with stress and anxiety concerning COVID-19 [53]. There is evidence of a high prevalence of anxiety [54,55], whereas this specific mental health outcome was under-recognized in China [56].

## OBSESSIVE-COMPULSIVE SYMPTOMS

Additionally, populations include pregnant women, children, and patients with pre-existing illnesses deploy avoidant behavior, perceived dirtiness [41], vigilant hand washing [23], and sterilizing compulsions to fortify themselves during pandemics. These drives of removing potential sources of contamination are driven by unwanted intrusive anxiety and fear of acquiring the highly contagious Covid-19. 75 % of patients with obsessive-compulsive symptoms have intense sensory experiences (pseudo-hallucinations) and perceptual experiences would amplify Contamination obsessions [57], undesirable intrusive worry and poorer insight [58], could worsen the viable inhalation injuries due to overuse of toxic cleaning supplies and atopic dermatitis [59,60]. Warped information processing can easily be exacerbated the threat of infectious pandemics and tends to overestimate threats [61], in association with increased negative behaviors in patients with obsessive-compulsive symptoms.

## DEPRESSIVE DISORDERS

Depression has increased during and after quarantine, one study done in China reviewed 54% of respondents rated the moderate or severe psychological impact of the Covid-19; 29% have anxiety symptoms; and 17% have depressive symptoms [62]. Several psychosocial conditions affected the mental health of the wellbeing and they perceive social exclusion or felt neglected [40], anger-hostility, fear, mood disorders [41,63], loneliness, boredom, low self-esteem [55], which can worsen by acknowledged privacy and freedom during isolation.

A 14-day self-quarantine may be the deterrent against an outbreak but if sequestration and social isolation occur for prolonged periods are associated with stress in adolescents and truncated sleep [38]. Globally, pandemic planning to incorporate preparedness and capacity for conducting prospective patient-focused clinical research [62] found an immediate psychological impact. Same reviewed by Linda Barratt R and colleagues about varying levels of stress found among the study participants who experienced quarantine [40]; inadequate supplies, difficulty securing medical care and medications are specific stressors [63]. It's a vulnerable interaction between biological and environmental stressors that subjectively affect decision-making. These stressors can be major precipitate and the helm of deterioration of clinical traits that impact on an already encumber health care system. As many health workers during the Ebola outbreak got infected without personal protective equipment and driven mainly by compassion [66].

## POST-TRAUMATIC STRESS DISORDER

Medical healthcare workers notably frontline female nurses reporting increased symptoms like distress, depression, emotion disturbance, and low sleep quality [45]; which would lead to potential problems with treating people. In support of this [23,63], reviewed that several mental health conditions like avoidance behavior posttraumatic stress-related symptoms, alcohol use, deterioration of work performance that will last even after three years of the quarantine period. Though mass home-confinement directives raise a concern about how people will react individually and collectively, reactions<sup>5</sup> offer valuable advice for healthcare workers to abate secondary traumatic stress, including escalated cognizance of symptoms, recline from work, engaging in self-care, recline from media coverage. A study done by the *US Department of Veteran Affairs, 2008* noted the most prevalent mental health issue following a meta-analysis on disaster having high incidence rates of post-traumatic stress disorder [67,68], major depressive disorders being the second most common<sup>37</sup>, and generalized anxiety disorders.

*Norris* and colleagues found incidents of acute stress disorder concerning the severity of crisis exposure instantaneous aftermath of a disaster [37]. In another study done by National Governors Association Center, 2006 found 28.9% with PTSD and 31.2% with depression during a SARS outbreak in Toronto, Canada [69]. Similarly, in another study it showed that 25% of the patients showed signs of PTSD and 15.6% with depression among the survivors of SARS [34]. Diagnostic and statistical manual of mental disorders, 2013 states that life-threatening viral infection does not meet the current criteria for a diagnosis of PTSD [70], however, other psychopathology, such as depressive and anxiety disorders, may ensue. Peril factors for mental health issues are high among children include poor mental health before a crisis [36], and stress with exhibit disruptive behaviors (aggression & outbursts of anger) and regressive behaviors may be more insidious among elementary children [71]. Whereas middle-aged adults, females, and those of lower socioeconomic status are more prone to PTSD [67,68].

While many people associate with PTSD but not all individuals are affected in the same manner, the medical practitioners developing brief/acute to PTSD [72]. As everyone

witnessed or experienced a traumatic event differently, their intrusive memories and recurrent dreams are few of the deleterious symptoms [73]. According to Suedfeld, aggravated stressful events create a desire to seek out the company of others, especially those who are undergo a homogeneous level of anxiety and trauma [74]. Psychological and psychiatric needs should be conceded as a part of pandemic management and another study reviewed approx. 57% of the participants reported momentous distress anxiety, anger, confusion, and PTSD during the isolation and quarantine [63]. On another side, study reviewed that people with entrenched neurosis have a lower life expectancy and poorer physical health outcomes [74].

## DISCUSSION AND CONCLUSION

The available literature has notably highlighted the emergence need for the predominant assistance measure like psychological crisis intervention for tremendous psychological problems during COVID 19. In the acute phase of an outbreak, when health systems prioritize testing might also need intact psychological counseling and psychiatric screening plays a pivotal role in response to patient care. The essential measures are adopted differently from individual to individual based on the level of severity and diligent outcome of baseline mental health breakdown. A practical plan to provide enough essential services different subpopulations like medical practitioners, frontline nurses, health care workers, and public health agencies in the address to their psychological state to help them in strengthening personal resilience and professional performance.

The traumatized outbreak has a profound socioeconomic burden as financial loss or financial stress, loss, unemployment, homelessness [78], discrimination, and stigmatization [23,79]. As not enough services are available for the medical practitioners dealing with infected patients to address their symptoms like anxiety, depression, suicidality [80], and post-traumatic stress disorder [7,8]. The associated with psychological distress and symptoms of mental illness [81], need a plethora of effective intervention programs to manage the needs of specific populations [82], and precautionary measures [83].

Unfortunately, the pandemic has unique challenges in terms of the necessary preventive measures, specific treatment, and vaccines. This challenging pandemic outbreak exacerbates anxiety, psychosis-like symptoms, and non-specific mental issues that health education and awareness of causality & progression will be effective prevention of disease spread [84]. With the above objective, we need to fill the lacunae in the existing literature to resolve a vigorous and multifaceted response.

Substantial evidence from the past studies regarding the pertinent need for strong social support systems in the periods before, during, and after the traumatic event [85], bolster the mental health following the courteous and rational communication. A study showed the urge for intense training of healthcare professionals to overcome their erudition and spurious believes during the Ebola outbreak in 2015 [86]. Following the H1N1 epidemic and Ebola virus outbreak in 2015, it was seen that the healthcare professionals and the general public have an intense urge for training and serious awareness of pandemic [84,86]. In review positive attitudes and better

awareness among health professionals. One web-study done on the Chinese population found a high prevalence of GAD and poor sleep quality under no statistical significance difference between the prevalence of GAD with 35.1%, 20.1% depression, and 18.2% sleep respectively [87].

Though several online mental health services like telemedicine psychological counseling and awareness program have been constructed across different countries or areas, however, chaotic management and coordination could result in the inefficiency of the services. The adverse effect of the COVID-19 is overwhelming, could need multidisciplinary mental health science to priorities the social, psychological, and neuro-scientific aspects of this pandemic. Crucially, the psychotherapeutic treatments leveraged the functional capacity using cognitive and behavioral mechanisms to protect against the sustained feelings of self-harm, and emotional problems [88,89]. Many of the anticipated consequences of quarantine [63], are strongly associated with experience low levels of anxiety [90], sustained feelings of loneliness and suicide attempts across the lifespan [91,92], leads to exhaustion of resources during epidemics/pandemics. The limited knowledge with unconcerned attitudes has high-level coordination potential fallout of an economic downturn on mental health including alcohol and substance misuse, gambling, anxiety, and fear in the public [44,81]. There should be a need for more enforcement on the awareness to mitigate distress and assess the exhibiting signs of the behavioral and emotional responses.

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