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REVIEW ARTICLE

PSYCHOLOGICAL, BEHAVIOURAL, INTERPERSONAL EFFECTS AND IMPLICATIONS OF COVID-19 PANDEMIC

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ABSTRACT

As the world is struggling with a Pandemic after a long time, most of the human race is having its first experience with the same. Scientists across the nations are working day and night to understand the causative virus better to find a cure. Though the signs and symptoms of this disease are known and recognised along with its effect on human body but somehow its effect on human psychology is largely ignored. Authors believe that the pandemic and its consequences such as lock down phenomena, restrictions and daily reporting of mortality on social media along with economic set back have caused a great impact on our psychology in general.

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INTRODUCTION

The ongoing outbreak of the COVID - 19 Pandemic has had profound and lasting effects on the society. One of the major effects includes the virus outbreak's impact on the society's mental health. COVID 19 is the first global pandemic of the social media age, which should have helped in more efficacious spread of information, but still there is a need for awareness regarding the challenges and distresses brought about by the pandemic. The outbreak is unprecedented in many ways and all efforts are being made globally in the public health front to contain and control it. While the focus has been and rightly so to save lives, which are impacted by co morbidities and to limit the spread of the virus to mitigate widespread mortality. However, it is equally important to address the impact of this virus on people's mental health as it leaves them isolated, anxious and depressed. The mental health effects related to the coronavirus spread are vast and vary at different levels of society. Among the patients with confirmed or suspected COVID 19 disease, there is a major fear of the

consequences of being infected with a potentially fatal new virus, while for those who are in isolation or quarantine, the feeling of experiencing denial, anxiety, loneliness and anger exists ¹. The healthcare and frontline workers face the maximum amount of mental stress, anxiety and other associated ailments. For a major percentage of the population, the underserved and underprivileged, this is a desperate financial & family crisis. No human is immune to the outbreak of such an infectious disease and till now the focus has been on controlling the outbreak and mitigating the short-term consequences. While such efforts were much needed and essential, dealing with the long-term consequences including the mental health effects are equally important.

Elucidation: The occurrence of the COVID 19 disease corresponds with the outbreak of the severe acute respiratory syndrome (SARS) in 2003 in China. The SARS disease which was caused by another type of coronavirus affected fewer than 10,000 people mainly in China and Hong Kong but rapidly spread to infect individuals in around 37 countries all over the world. Although the diseases have different clinical presentations, both the outbreaks were similar in context of its

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infectious cause, rapid transmission pattern, epidemiological traits, and insufficient preparedness of health authorities to address the outbreak. The SARS pandemic was also known to be the first outbreak to focus on mental health aspects in its aftermath. Given the outbreak's high levels of unfamiliarity and uncontrollability, the mental health impact was relatively high as well^{2,3}. Governance and leadership have not yet paid sufficient attention to the failing mental health of a significant part of the population. This is particularly so in developing and underdeveloped countries. In China, its National Health Commission notified the fundamentals of response to emotional crisis due to COVID 19 in January 2020. "This notification contained a reference to mental health problems and interventions that occurred during the 2003 SARS outbreak, and mentioned that mental health care should be provided for patients with 2019-nCoV pneumonitis, close contacts, suspected cases who are isolated at home, patients in fever clinics, families and friends of affected people, health professionals caring for infected patients, and the public who are in need"⁴.

Psychological effects on general public: At an individual level, the spread of such a fatal infectious disease does not just lead to aggravation of pre-existing mental health conditions among the general public but also leads to acquisition of new psychiatric symptoms in people without mental illnesses. Regardless of exposure, people may experience fear and anxiety of falling sick or dying, helplessness, or blame of other people who are ill, potentially triggering off a mental breakdown⁵. The lockdown imposed by various governments globally to contain the spread of the virus has jeopardized several small and medium scale industries followed by widespread loss of jobs and ensuing unprecedented financial crises. With a bleak and uncertain future and no immediate solution in sight, the general populace is mired with negative thoughts and emotions. This leads to varying levels of anxiety bordering on depression with suicidal tendencies⁵. Furthermore, those with pre-existing physiological ailments needing regular medical interventions such as dialysis, chemotherapy and or even physiotherapy no longer have access to those as hospitals and health care facilities are being used for management of COVID 19 patents. This not only impacts the physical health of general patients but also serves to aggravate their mental health levels. One of the significant methods to control the spread includes self-quarantine at home and social distancing. This can lead to development of social anxieties and insecurities. Specially for those individuals who are stranded alone, living in a foreign country away from home and elderly citizens. These individuals experience panic, helplessness and fear of prolonged isolation. Social media despite all its advantages has proved to be quite the devil in disseminating rumors and fake news and misinformation regarding the statistics, spread and the possible cure. Replete with multifarious potential curative possibilities, social media offers a plethora of preventive and prophylactic methodologies leading to confusion and mistrust in communities. Spread of unverified information from unreliable sources adds to the problem.

Psychological effects on COVID 19 patients: The population affected by or suspected of being infected with COVID 19 are bound to be overwhelmed with various mental health issues with majority revolving around fear and anxiety of battling with the virus. Affected victims of the outbreak also face social

ostracisation and mental harassment by the community around them fueling further unrest.

Such emotions can further aggravate pre-existing mental health disorders such as anxiety and depression. This deadly virus has various clinical presentations including symptoms such as fever, hypoxia and cough, as well as adverse effects of treatment, such as insomnia caused by corticosteroids which could further heighten mental distress². In a study conducted by Siew E Chua *et al*, stress and psychological impact in SARS patients during the 2003 outbreak was examined. The results disclosed that stress was significantly higher in SARS patients than in healthy control subjects. Stress correlated notably with negative psychological effects. It also concluded that functional impairment was apparent in the post recovery phase⁶. Moreover, affected patients experience guilt of possibly transmitting the disease to other family or community members. Existential dilemmas get aggravated as uncertainties loom large and life ceases to hold meaning. These translate into mental health deterioration leading to depression or worsening of preexisting depression.

Psychological effects on Healthcare Workers: Various studies have been conducted during the SARS pandemic that revealed the long-term psychological effects such as Post-traumatic stress specially in healthcare workers. "The essential feature of post traumatic stress disorder (PTSD) is the development of characteristic symptoms after exposure to extreme traumatic stress or direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm or threat of death or injury experienced by a family member or other close associate. The person's response to the event must involve intense fear, helplessness or horror"^{7,11}. The SARS Pandemic which was a severe life threatening and life altering outbreak was considered to be an event that could reduce PTSD. In a study conducted by Ping wu *et al*, the psychological impact of the 2003 outbreak of severe acute respiratory syndrome (SARS) on hospital employees in Beijing, China was examined. In the 3-year period following the outbreak, the study revealed about 10% of the hospital employees had had high SARS-related Post traumatic Stress (PTS) symptoms since the 2003 SARS outbreak⁸. A similar survey was conducted by Maunder RG *et al* in Toronto to measure psychological stress in hospital workers and measure factors that may have mediated acute traumatic responses during the SARS Pandemic of 2003. They concluded a high impact event scale scores mediated by three factors: health fear, social isolation, and job stress among nurses and healthcare workers having contact with patients with SARS at three Toronto hospitals in May and June 2003^{9,10}. C Y Lin *et al* conducted a study to investigate the influence of SARS on the psychological status, including PTSD symptoms, of the medical staff working in Taichung Veterans General Hospital (Taichung, Taiwan, ROC). As a result, it was found that 86 of 92 (93.5%) medical staff considered the SARS outbreak to be a traumatic experience. Most staff in the emergency department and in the psychiatric ward had PTSD. Emergency department staff had more severe PTSD symptoms than staff in the psychiatric ward¹¹. Similar such studies were conducted by researchers like Chong MY *et al* and Phua DH *et al* which were based upon the psychological effects of the SARS pandemic in its aftermath. There have

been various studies conducted among disaster survivors that revealed over three-fourths of those having PTSD after a disaster still have it about 1 year later. These findings act as an aid to our knowledge of the persistence of PTSD symptoms among first responders and healthcare workers to disasters. Studies have also shown that a person's PTSD is likely to continue for a long term if it persists for more than 6 months after an event^{12,13,14}. Observing the pattern of these previous studies and keeping in mind their conclusions, it is essential to conduct such studies and surveys among health care workers and the outbreak's frontline workers to understand and create awareness regarding the psychological effects of the ongoing COVID 19 outbreak as well.

DISCUSSION

The psychological impact of stressful events related to the COVID 19 pandemic largely depend on people's perceptions and previous studies such as that by Wu *et al.*, 2009, Maunder *et al.*, (2003) and Folkman and Greer (2000) have shown that timely psychiatric treatments should be provided for those with severe mental health problems^{8,9,15}. Some methods used in the SARS outbreak could be helpful for the response to the COVID 19 outbreak. Multidisciplinary mental health teams established by health authorities at local and national levels should deliver mental health support to patients and healthcare workers. These teams should include psychiatrists, psychiatric nurses, clinical psychologists, and other mental health workers. For patients with severe mental health disorders should receive specialised psychiatric treatments and appropriate mental health services. To decrease isolation related anxiety, virtual and safe communication encouraged to provide psychological counselling between patients and families.

To address uncertainty and fear among patients and healthcare workers, they should be provided with accurate updates regarding the COVID 19 outbreak. This includes regular updates regarding treatment plans, health status and progress reports of patients to be shared with both patient and their families. Affected/suspected patients along with healthcare workers and their caretakers and families should undergo regular clinical screening for depression, anxiety, and suicidal tendency by mental health workers. For most patients and health workers, emotional and behavioral responses are part of an adaptive response to extraordinary stress, and psychotherapy techniques such as those based on the stress-adaptation model might be helpful^{10,15}. Basic pharmacological treatment protocol ensuring minimum harm should be followed while prescribing psychotropic medications for severe psychological disorders¹.

Conclusion

Most mental health issues associated with a disaster such as fear, uncertainty and stigmatisation act as barriers to appropriate medical and mental health interventions. Based on the psychological impact of past viral epidemics and the ongoing outbreak, it is essential to develop and implement mental health assessment, support, treatment and services. It is fundamental that the psychological impact of this outbreak should not be ignored as it is a crucial factor in overcoming this crisis. Mental health implications are long lasting even after the pandemic has ended. There is need for the provision of coordinated psychological mediation worldwide as the

outbreak highlights the frailty of the public's mental health at various society levels⁵.

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