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Impact of COVID-19 on mental health: A literature survey of the existing research

Ms. Varsha A. Malagi

Assistant Professor, SOSH, Department of Psychology, CMR University, Bengaluru

Ms. Ashwini S. Shetty

Assistant Professor, Dept. Of PG Studies and Research in Psychology, SDM College (Autonomous), Ujire

Dr. Vandana Jain

Assistant Professor and Head, Dept. Of Psychology, SDM College (Autonomous), Ujire

Ms. Akhila Rao

Assistant Professor, SOSH, Department of Psychology CMR University, Bengaluru

Abstract---With over 720,000 cases and 33,000 confirmed deaths reported to far, the COVID-19 pandemic is a severe health disaster affecting multiple countries. Widespread breakouts have been linked to negative mental health repercussions. With this in mind, existing material on the COVID-19 outbreak that was relevant to mental health was found using the PubMed database. The overall themes of published papers were classified and summarized. According to preliminary research, anxiety, and sadness (16–28%), as well as self-reported stress (8%) are prevalent psychological reactions to the COVID-19 pandemic and may be linked to sleep disturbances. This risk is moderated by a number of individual and systemic factors. Both the requirements of the people concerned and the essential preventive recommendations must be considered when preparing services for such populations. The existing material comes from only a few of the countries affected, and it may not reflect the experiences of people in other areas of the world. Finally, a common response to the COVID-19 pandemic is sub-syndromal mental health disorders. More representative research from other affected nations is needed, especially in disadvantaged groups.

Keywords---COVID-19, mental health, literature survey, existing research.

Introduction

The unique coronavirus illness – officially recognized as COVID-19 by the World Health Organization – began as a cluster of unexplained pneumonia cases in Wuhan, China, and has since spread to countries all over the world. Over 720,000 confirmed cases and 33,000 deaths attributed to this disease have been documented as of March 30th, 2020. To combat the spread of COVID-19 in the aftermath of this global health crisis, strict public health measures have been established (Adhikari et al., 2020). Infectious disease outbreaks, such as COVID-19, are linked to psychological distress and signs of mental illness (Bao et al., 2020). Psychiatrists all across the world should be aware of these symptoms, their correlates, and management options that consider both the needs of certain communities (Yang et al., 2020) and the preventative steps needed to prevent COVID-19 from spreading (Liu et al., 2020a). They should also be aware of gaps in the existing literature, which may need to be filled over time by more extensive clinical experience and research. The current review was created with the above goals in mind: to summarize the existing literature on mental health risks associated with the COVID-19 epidemic.

Methodology

Article selection and search methodology

The current article is a narrative evaluation of the existing evidence on COVID-19-related mental health symptoms and therapies. The search phrases "*new coronavirus*," "*COVID-19*," "*nCoV*," "*mental health*," "*psychiatry*," "*psychology*," "*anxiety*," "*depression*," and "*stress*" were used in various permutations and combinations in the PubMed electronic database. Using this strategy, a total of 47 citations were found. Following a review of the above citations, 19 articles were eliminated: three because they were only available in Chinese, and sixteen because they dealt with other aspects of the COVID-19 outbreak, such as drug therapy, animal models, public health, and preventive measures, and health-care system organization. A thorough examination of these 16 articles revealed no information about mental health.

A thematic and methodological examination of chosen articles

This review comprised the remaining 28 papers. Only a fraction ($n = 4$) of the 28 publications could be considered "*original research*." The design of all four research was cross-sectional and observational. Letters to the editor ($n = 16$) and editorials or commentary on mental health and COVID-19 ($n = 8$) made up the remaining 24 pieces. Because a formal systematic review or meta-analysis was not possible due to the nature of the above publications, a narrative review was conducted, prioritizing the few observational studies available and briefly summarizing the key themes from the other publication categories. The review was organized around five broad themes identified in the 26 publications: (a) observational studies reporting on mental health symptoms in specific populations, (b) commentary and correspondence broadly addressing the psychological impact of COVID-19 on the population, (c) commentary and correspondence addressing the impact of COVID-19 on healthcare workers, and

(d) commentary and correspondence specifically related to high-risk or vulnerable populations. The majority of published publications (18/28; 64.3 percent) and all observational studies (4/4; 100%) came from Chinese institutions. Iran and Canada each had two publications; Brazil, Singapore, India, and Japan each had one; and two publications had no specific country of origin.

Findings

Observational research on COVID-19-related mental health issues

Four research, all from Chinese institutions, looked at the incidence of specific mental health-related factors in COVID-19 victims (Wang et al., 2020; Xiao et al., 2020a; Li et al., 2020; Xiao et al., 2020b). The table below summarizes their findings (Table 1). Only one study has offered rough estimates of the frequency of individual mental health symptoms, with anxiety being the most common, as seen in the above results. In both types of research that looked into this link, anxiety was linked to poor sleep (Xiao et al., 2020a, b). The availability of accurate information and the use of specific preventive measures, such as handwashing, seemed to mitigate these effects in the population-based study. Female gender, being a student, having symptoms suggestive of COVID-19, and having poor perceived health were all associated with higher rates of anxiety and depression (Wang et al., 2020). Other countries did not have any descriptive research of this type.

Literature on COVID-19's mental health effects in the general population

Based on literature from prior disease outbreaks or specified theoretical models, eight publications, including comments (n = 4) and letters (n = 5), addressed the potential mental health impact of COVID-19 on the general community. This group of articles has a wider geographical diversity, with papers from China, Canada, Iran, Japan, Singapore, and Brazil. Two of these studies looked at how the COVID-19 pandemic would affect certain countries. Unpredictability, ambiguity, the gravity of the sickness, disinformation, and social isolation all play a part in stress and mental morbidity, according to one study from Iran (Zandifar and Badrfam, 2020). The authors emphasized the importance of mental health services, particularly for vulnerable individuals, as well as social capital building to mitigate the outbreak's negative psychological effects. Another study from Japan (Shigemura et al., 2020) focused on COVID-19's economic impact and effects on well-being, as well as the general public's likely high levels of fear and panic behavior, such as resource hoarding and stockpiling. Patients with COVID-19 and their families, people with existing physical or psychiatric illness, and healthcare staff were all identified as groups at higher risk of negative mental health outcomes in this study.

One of the remaining papers stated that COVID-19's wide scope and spread could result in a true mental health crisis, particularly in countries with high caseloads (Dong and Bouey, 2020), necessitating large-scale psychosocial crisis interventions as well as the incorporation of mental health care into disaster management plans in the future. According to a related report (Duan and Zhu, 2020), while Western countries have incorporated psychological interventions into their disease outbreak protocols, this has not yet happened in countries like

China, resulting in the emergence and persistence of stress-related disorders in affected individuals. This research also made recommendations for developing intervention techniques, which are summarized in section 3.5. In contrast, Bao et al. (2020) highlighted the services that were already available in China, as well as a list of strategies for the general public to reduce outbreak-related stress: (1) assessing the accuracy of the information, (2) increasing social support, (3) reducing the stigma associated with the disease, (4) maintaining as normal a life as possible while adhering to safety measures, and (5) using available psychosocial services, particularly online. According to them, such strategies would enable society to respond to the COVID-19 pandemic in an adaptive manner. Similar strategies were echoed in a paper from Singapore (Ho et al., 2020), which discussed the importance of improved mental disorder screening, improving links between community and hospital services, and providing accurate information to the general public in order to reduce maladaptive responses like “*panic*” and paranoia about the disease and its transmission. Finally, a brief review study (Lima et al., 2020) underlined the role of anxiety as the dominating emotional response to an outbreak, as well as the importance of sufficient healthcare personnel training and the best use of technological improvements to give mental health treatment.

In contrast to the previous literature on practical factors, two Canadian publications (Asmundson and Taylor, 2020a, b) have looked into COVID-19’s mental health impact from the perspective of health anxiety. In ordinary life, health anxiety, which develops from a misunderstanding of reported physical sensations and changes, might be protective. However, during an outbreak of infectious disease, health anxiety can become extreme, especially if the media provides false or exaggerated information. This might show as maladaptive behaviors on an individual level (repeated medical consultations, delaying health treatment even when actually unwell, hoarding specific goods); on a societal level, it can lead to mistrust of governmental authority and scapegoating of specific communities or groups. The authors stress the importance of doing evidence-based research into health anxiety and its drivers in order to create effective individual and population-level methods to reduce it in the face of the COVID-19 pandemic and future outbreaks of a similar sort.

Literature on COVID-19’s mental health effects on healthcare workers

As mentioned briefly in section 3.1, healthcare personnel are at a high risk of developing mental illnesses as a result of the COVID-19 pandemic. Long working hours, the risk of infection, a lack of protective equipment, loneliness, physical exhaustion, and separation from family are all reasons for this (Kang et al., 2020). This topic has been addressed in three papers, all from Chinese centers, excluding observational studies. One of them graphically highlights the disconnect between a hospital’s planned offerings and the real needs of healthcare staff (Chen et al., 2020). To address the mental health of their employees, this center devised a three-pronged strategy: the creation of an intervention team that would provide online materials, the introduction of a psychological aid hotline, and group stress-reduction activities. However, the healthcare staff themselves were hesitant to participate in this scheme. This programme was redesigned after a direct interaction with workers to include the

provision of a resting place, basic physical needs such as food, instruction on the care of COVID-19 patients, information on protective measures, leisure activities, and occasional counselor visits to the rest area. This increased happiness among healthcare professionals and emphasizes the importance of continual feedback and programme modification if such programmes are not acceptable to the workforce. To minimize stress levels and reduce the risk of depression, Liu et al. (2020b) suggested that mental health professionals work closely with those working in critical care units, while Kang et al. (2020) noted the positive impact of telephone helplines on healthcare workers to specifically address mental health problems. There has been no published literature on healthcare personnel from other nations to date.

Literature on COVID-19's mental health hazards in vulnerable groups

Seven papers (correspondence, $n = 6$, commentary, $n = 1$) have identified specific populations that may be particularly sensitive to the COVID-19 pandemic's mental health effects, with some of them suggesting interventions and service provision. The elderly (Yang et al., 2020), the homeless (Tsai and Wilson, 2020), migrant workers (Liem et al., 2020), the mentally ill (Yao et al., 2020a; Zhu et al., 2020), pregnant women (Rashidi Fakari and Simbar, 2020), and Chinese students studying abroad are among the vulnerable groups identified by these authors (Zhai and Du, 2020). The two findings from China (Yao et al., 2020, Zhu et al., 2020) on COVID-19 and patients with pre-existing psychiatric diseases are of special relevance to practicing psychiatrists. A single COVID-19 outbreak has been reported to a psychiatric hospital, affecting roughly 50 patients and 30 staff, and was contained by rigorous quarantine. Overcrowding, a lack of general medical facilities in psychiatric hospitals, a lack of expertise among mental health workers, and difficulty securing patient cooperation for preventive measures, particularly among those suffering from psychotic disorders, could all be factors (Zhu et al., 2020). Patients with pre-existing mental problems, on the other hand, maybe more vulnerable to relapse or new episodes of their disorder as a result of the stress connected with the COVID-19 outbreak (Yao et al., 2020a). Psychiatrists must become familiar with screening and triage methods during this time and collaborate closely with physicians and public health specialists to reduce the hazards that their patients encounter (Zhu et al., 2020).

Specific issues raised in relation to the other populations listed above include the elderly's high rates of pre-existing depressive symptoms and their lack of access to mental health services (Yang et al., 2020); the homeless's fears of involuntary admission or imprisonment, which may act as a barrier to mental health care (Tsai and Wilson, 2020); and the need for outreach and social support among migrant worker populations to reduce the risk of common mental illnesses (Yang et al., 2020 (Zhai and Du, 2020). Close collaboration between psychiatrists and specialists from other areas of medicine, as well as with local authorities and community health workers, is critical in all of these circumstances.

Therapeutic techniques and interventions

Five studies have directly addressed the employment of specific ways to give mental health care to people affected by the COVID-19 outbreak (correspondence,

n = 2; commentary, n = 3). (Duan and Zhu, 2020; Liu et al., 2020a; Xiao, 2020; Zhou et al., 2020; Yao et al., 2020b). Furthermore, an article from India emphasized the relevance of psychiatrists in general during the COVID-19 pandemic. The psychiatrist has six important roles, according to this paper: a) public education about the common psychological effects of a pandemic, b) motivating the public to adopt disease prevention and health promotion strategies, c) integrating their services with available health care, d) teaching problem-solving strategies to cope with the current crisis, e) empowering COVID-19 patients and their caregivers, and f) providing mental health care to healthcare providers (Banerjee, 2020).

The development of teams of specialists qualified to address emotional distress (Duan and Zhu, 2020); the training of community health personnel in basic aspects of mental health care (Duan and Zhu, 2020); the use of online surveys to assess the scope of mental health problems (Liu et al., 2020b); the development of online materials for mental health education (Liu et al., 2020a); the provision of on-demand mental health services (Liu et al., 2020a (Yao et al., 2020b)). Such solutions hold the promise of making mental health care more accessible while reducing the danger of infection. However, they are very dependent on the availability of skilled labor and infrastructure, and it is unclear how widely these ideas will be accepted. Furthermore, they have yet to be tested or validated in the intended populations.

Concluding remarks and future directions

Despite the fact that there are few large-scale observational studies in this field to date, it is clear that the COVID-19 pandemic has prompted a robust and multifaceted response from psychiatrists and allied professionals, and that mental health is clearly being considered at multiple levels– in the general population, among healthcare workers, and in vulnerable populations. Despite the low quality of evidence in the current literature, it still provides a wealth of useful insights and suggestions for all professionals working in this field, whether they work in psychiatric or general hospitals or in the community. As the number of patients affected by the pandemic grows, the psychiatric profession, particularly in Asian countries, faces a challenge as well as an opportunity: the challenge of addressing the numerous barriers and limitations identified in the above literature, as well as the opportunity to implement those suggestions or recommendations that are feasible at a local or regional level. COVID-19's long-term mental health effects may take weeks or months to manifest and controlling them requires a coordinated effort not only from psychiatrists but from the entire healthcare system (Maunder, 2009). More study, even early or pilot studies, is needed to estimate the scale of this pandemic in other countries, especially in those where mental health infrastructure is less developed, and the impact is likely to be greater (Duan and Zhu, 2020). COVID-19's influence on additional vulnerable populations, such as children and adolescents, those living in isolated or rural locations with limited access to health care, and those from lower socioeconomic strata, should be studied. Furthermore, time-limited, culturally responsive mental health therapies that can be taught to healthcare personnel and volunteers are needed. Such interventions should be tested after they have

been established, so that information about effective therapy procedures can be broadly communicated among individuals working in this field.

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