The impact of COVID-19 lockdown on mental health: A study from rural population of Haryana, India

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Abstract

Introduction: COVID-19 (Coronavirus Disease 2019) is a disease caused by a virus named SARS-CoV-2 and was discovered in December 2019 in Wuhan, China, a global threat has largely affected the country's economic and social values. Moreover, the mitigation strategies being used to counterattack the pandemic attributes a lot of unrest and stress in the masses which has led to several mental health problems like anxiety, depression, sleep loss, post-traumatic stress disorder, etc. Objective: In this study, the impact of lockdown on mental health and its related disorders was observed. Method: A total of 367 patients from 69 villages of Narwana sub-division, Haryana, India was included in this study and their mental health status was assessed using Beck's Depression Inventory (BDI). Results: Out of the 367 mental health-related patients, half of them (~48%) showed the signs of depression ranging from mild to severe. Also, 40% of the patients showed signs and symptoms of anxiety, fear and stress and (~15%) showed signs of sleep loss. Women (~58%) were significantly found to be more prone to mental illness and psychiatric disorders than men (~42%). This study also reports the increase in domestic violence cases during the lockdown period. The study presents a clear understanding that although lockdown and social isolation helps in achieving the goal of reducing infections, a restricted access of social support systems leads to loneliness and various mental issues including anxiety and depression. Conclusion: We conclude that COVID-19 is a big threat to women safety and health especially in rural population and as the crisis evolves and continues, it is very essential to raise awareness and psychological counseling among the masses.

Keywords: COVID-19, domestic violence, mental health, psychiatric disorders, sleep loss, stress

Introduction

The COVID-19 pandemic has imposed several threats to the physical and mental well-being of individuals across the globe. The world is facing a highly pathogenic novel coronavirus, severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2), the invisible global enemy, and the attention of the globe is keenly pointed toward the measures that are necessary to prevent and alleviate its transmission. As of June 1, 2020, more than 93000 cases of COVID-19 are reported in India with 5394 deaths according to Ministry of Health and Family Welfare, Government of India (https://www.mohfw.gov.in/). Large amounts of information are flowing in through media and social conversations, causing stress, restlessness, insomnia/sleep disturbances, anxiety, depressive symptoms, emotional distress, thereby affecting mental. More than 300 Chinese patients with psychiatric disorders have been diagnosed during COVID-19.

In order to address to the problems of this pandemic, various public health measures such as isolation, social distancing,
and personal hygiene are being advised to reduce the risk of infection.

Currently, approximately 2.6 billion people, that is, one‑third of the world’s population are living under some sort of lockdown or quarantine.[7] This is perhaps the largest psychological test ever conducted. Although lockdown and social isolation reduces the risk of infections, it also causes loneliness and this feeling of being isolated increases mental health issues like anxiety, depression, insomnia, restlessness, development of negative symptoms, increased vulnerability, and many more.[8‑13] Thus, during these stressful conditions, each individual is trying to look into psychological interventions like psychological counseling, awareness regarding the disease, and even medications in severe cases along with adopting necessary measures. At this point of time, it is very crucial to educate the masses about the importance of isolation and awareness regarding the mental health issues they may experience during this period.[14‑16] Taking into account all these risk factors, the present study was conducted to observe the effects of COVID‑19 pandemic on the mental health status of rural population of Haryana, India. Based on this study, a prospective mental care and rehabilitation plan can be formulated for those individuals on whom stress could have severely impacted.

Methods

Participants

In the present study, 367 participants with mental health issues were recruited from around 69 villages of Narwana sub‑division, Haryana, India and the impact of lockdown on mental health issues was observed during the lockdown period from March 25, 2020 to May 13, 2020. The result of the present study is based on the data reported in Civil Hospital Narwana, district Jind, Haryana and we used Hindi version of Beck’s Depression Inventory (BDI) to assess the severity of Depression. The BDI was created by Aaron T. Beck, is a 21‑question multiple‑choice self‑report inventory, one of the most widely used psychometric tests for measuring the severity of depression. When the test was scored, a value of 0 to 3 was assigned for each answer and then the total score was compared to determine the depression’s severity. The standard cut‑off scores were 10‑18: indicates mild depression, 19‑29: indicates moderate depression, 30‑63: indicates severe depression. Higher total scores indicate more severe depressive symptoms. The study obtained ethical clearance from the hospital where the study was carried out.

Statistical analysis

Chi‑square test was administered using IBM SPSS 21 software to analyze whether various levels of stress and mental health problems vary across gender.

Results

The study participants who were unemployed reported worse life satisfaction and reported more mental health issues as compared to those who were able to work during this lockdown.

Out of the 367 patients who reported to emergency department of hospital for mental health issues, 143 (38.96%) patients were having anxiety and panic disorder due to fear and stress and were managed with psychological counseling, reassurance, and placebo medications, 76 (20.71%) patients were diagnosed with moderate depression and were managed with psychological counseling and medications [Figure 1]. Almost, 68 (18.52%) patients were diagnosed with mild depression, and were managed with psychological counseling and placebo medications, and 24 (6.53%) patients were diagnosed with severe depression who were managed with the help of psychological counseling and medications like anti‑depressants, sedatives, multivitamins. A total of 56 (15.26%) patients reported insomnia/disturbed sleep and were managed with psychological counseling and sleep inducers like clonazepam [Figure 1].

Out of 367 patients, 214 (58.31%) were women and 153 (41.69%) were men [Figure 2] which clearly indicates that women are more prone to mental illness and psychiatric disorders than men [Table 1]. A Chi‑square test of independence showed that depression levels and insomnia were significantly higher in females than males (p = 0.009).

Also, the cases of domestic violence saw a surge during the lockdown period. Out of the 146 medico‑legal cases of assault reported during lockdown, 44 (30.13%) cases of assault were on women and mostly within the age group of 20‑40 years, 6 (4.11%) cases of organophosphorus compound poisoning (suicidal) were also reported. Also, five cases of deaths were reported in which two deaths were due to suicidal Celphos poisoning, one death due to suicidal hanging, and two deaths due to suicidal railway accident. Most of the women who were assaulted also reported repeated violence on their children by father or other male members of the family during the lockdown phase. Before the lockdown period, only 12 (8.22%) cases of assault on women were reported and thus there has been a surge in cases of domestic violence on women from 8.22% to 30.13% out of the total cases of assault reported during the lockdown period.

Discussion

The study shows the effects of COVID‑19 pandemic lockdown on the mental health of rural population of Haryana, India. Along
with causing various psychiatric disorders, COVID-19 is a big threat to women safety, and cases of domestic violence, physical assault, and mental abuse are increasing steadily. Various factors are coming into picture as the most common being unemployment, reduced social contacts, no school for children (child abuse also increasing), fear and stress, financial crisis/strain, hunger, alcoholics/drug addicts, those who cannot buy alcohol/drugs resulting into withdrawal symptoms (like insomnia, tremors, hallucinations), fear of future, loneliness, etc. Suicide is an important health problem and is expected to increase during the COVID-19 pandemic. The number of cases for domestic violence with women and suicides are increasing at a drastic rate. The major factors held responsible are unemployment, financial crisis, and alcoholism. Mental health issues are increasing and the percentage shows that women are more affected in comparison to men. Thus, in such a scenario, women safety is at high risk and required immediate consideration.

The COVID-19 as a threat has added to lot of unrest and stress in the masses which has caused several mental health issues like anxiety, obsessive compulsive disorder, sleep loss, and post-traumatic stress disorder which must be controlled immediately in its initial phases. It is very essential to appropriately treat sleep disturbances which in turn will reduce the symptoms of psychiatric disorders and suicidality. Treating sleep disorders and identifying the sleep loss symptoms is very crucial in the COVID-19 situation in both psychiatric as well non-psychiatric patients. During COVID-19 infection stage several biochemical changes are noticed which can influence the circadian cycle of sleep. Lockdown and social isolation have definitely contributed to the prevention of infection but simultaneously has restricted the access to social support systems thereby causing mental health problems. In a study by Kaur et al., concerns about one’s own health and that of their beloved ones (particularly elderly or suffering from any physical illness), as well as uncertainty about the future, can generate or exacerbate fear, depression, and anxiety. In our study, we also found that concerns about the health of self and beloved ones, unemployment, home isolation, drug addiction, fear of future were the main factors contributing to the mental health issues. On dated June 12, 2020 a news was published in the leading newspaper “The Times of India” titled “Mental illness cases rising in Haryana during lockdown: Experts” of Chandigarh edition says many people are approaching health department due to coronaphobia with symptoms like suicidal thoughts, depression, insomnia, etc. and in our study, we also found the same symptoms.

The mental health tolls observed in the context of COVID-19 are multifactorial and include biological, behavioral, and environmental factors. It is essential to elucidate the consequences of COVID-19 on individual's mental health and immediately address to these health problems. Therefore, the individuals especially women in rural areas should be educated about the psychological impacts of this deadly disease, psychological and sleep loss symptoms, and available counseling centers available for immediate help.

We need to have a clear vision for primary care mental health and family medicine plays an important role in this. We need to be able to share best practice in delivery of mental health in primary care and our study focus for sharing work of those who have an interest in mental health within communities, families, and primary care. Diagnosis and treatment is very important in amelioration of mental health issues and our study is a help for family physicians in curing mental health issues.

**Conclusion**

We conclude that COVID-19 and especially lockdown is a big threat to women safety and health especially in rural population and as the crisis evolves and continues, it is very essential to raise awareness and psychological counseling among the masses. The study represents the psychological impact of the novel coronavirus outbreak in the community of rural Haryana population. The findings can be preliminary evidence for conducting a larger longitudinal study to guide policymakers for subsequent research and clinical intervention strategy for mental health concerns related to COVID-19.

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Declaration of patient consent
The authors certify that informed consent has been taken from the patient for the present communication.

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Conflicts of interest
There are no conflicts of interest.

References
1. Holmes EA, O'Connor RC, Perry VH, Tracey I, Wessely S, Arseneault L, et al. Multidisciplinary research priorities for the COVID-19 pandemic: A call for action for mental health science. Lancet Psychiatry 2020;7:547-60.
2. Vindegaard N, Benros ME. COVID-19 pandemic and mental health consequences: Systematic review of the current evidence. Brain Behav Immun 2020;89:531-42.
3. Shuja KH, Aqeel M, Jaffar A, Ahmed A. COVID-19 pandemic and impending global mental health implications. Psychiatr Danub 2020;32:32-5.
4. Tracy D, Forrest A, Underwood BR. The role of integrated mental and community physical healthcare trusts in responding to the COVID-19 pandemic in the UK. BJPsych Bull 2021;45:129-31.
5. Lopes BCDS, Jaspal R. Understanding the mental health burden of COVID-19 in the United Kingdom. Psychol Trauma 2020;12:465-7.
6. Sher L. The impact of the COVID-19 pandemic on suicide rates. QJM 2020;113:707-12.
7. Rajkumar RP. COVID-19 and mental health: A review of the existing literature. Asian J Psychiatr 2020;52:102066.
8. Fearon P. Opening up while locking down: How an Irish independent sector mental health service is responding to the COVID-19 crisis. Ir J Psychol Med 2020;37:172-7.
9. García-Fernández L, Romero-Ferreiro V, López-Roldán PD, Padilla S, Calero-Sierra I, Monzó-García M, et al. Mental health impact of COVID-19 pandemic on Spanish healthcare workers. Psychol Med 2022;52:195-7.
10. Kang C, Tong J, Meng F, Feng Q, Ma H, Shi C, et al. The role of mental health services during the COVID-19 outbreak in China. Asian J Psychiatr 2020;52:102176.
11. Ransing R, Ramalho R, Orsolini L, Adiukwu F, Gonzalez-Diaz JM, Larnaout A, et al. Can COVID-19 related mental health issues be measured? Brain Behav Immun 2020;88:32-4.
12. Summers-Gabr NM. Rural-urban mental health disparities in the United States during COVID-19. Psychol Trauma 2020;12:S222-4.
13. Wasserman D, van der Gaag R, Wise J. The term "physical distancing" is recommended rather than "social distancing" during the COVID-19 pandemic for reducing feelings of rejection among people with mental health problems. Eur Psychiatry 2020;63:e52.
14. Grech P, Grech R. COVID-19 in Malta: The mental health impact. Psychol Trauma 2020;12:534-5.
15. Killigore WDS, Cloonan SA, Taylor EC, Dailey NS. Loneliness: A signature mental health concern in the era of COVID-19. Psychiatry Res 2020;290:113117.
16. O'Connor K, Wrigley M, Jennings R, Hill M, Niazi A. Mental health impacts of COVID-19 in Ireland and the need for a secondary care mental health service response. Ir J Psychol Med 2021;38:99-107.
17. Xiang Y-T, Zhao Y-J, Liu Z-H, Li X-H, Zhao N, Cheung T, et al. The COVID-19 outbreak and psychiatric hospitals in China: Managing challenges through mental health service reform. Int J Biol Sci 2020;16:1741-4.
18. Bansal H, Kumar V, Mehta R. Diagnostic comparison of biochemical profile in patients with Covid-19, dengue and Acute Febrile illness: Implications for patient management. Clin Epidemiol Glob Health 2021;12:100844.
19. Kaur N, Singh Sethi HJ, Bedi S, Dwivedi D. Analysis of psychosocial impact on health care workers and general population of India during COVID 19 pandemic using HAM-A scale. J Assoc Physicians India 2021;69:11-2.