Efficacy of psychological intervention in patients with post-COVID-19 anxiety

ABSTRACT

Background: Individuals who suffered from COVID-19 remain stressed and worried about anxiety issues for significant changes in daily living activities, causing strong emotional distress. **Aim:** The aim of this study was to assess the efficacy of psychological intervention in patients with post-COVID-19 anxiety. **Materials and Methods:** Thirty patients recovered from COVID-19 were selected for the study of age group 20–45 years of both the sexes. Initially, sociodemographic data sheet was filled, and after that, Mental Health Inventory (MHI) was administered. The patients who scored less on MHI were taken for the study, and psychoeducation, relaxation exercises, and activity scheduling were given to them. The goal of intervention was to prepare the patients to learn, interpret, and react to physical and psychological symptoms related after recovering from COVID-19 infection. The intervention was done for 30 min twice a week for 1 month, after that again postassessment was done to see the efficacy of psychological intervention. **Results:** Result reveals a significant improvement in mental health-related issues after psychological intervention as assessed by the MHI. **Conclusion:** Psychological intervention resulted in significant improvement of post-COVID-19 anxiety and related mental health issues.

Keywords: COVID-19, pandemic, psychological psychoeducation, relaxation

The COVID-19 pandemic has had a substantial destructive impact on society leading to major challenges to mental health services worldwide. Apart from relapse and recurrence of existing psychiatric illnesses there is also a spate of new emerging psychological emergencies. COVID-19 pandemic remains stressful for people worldwide around, and the associated fear about this new disease-related anxiety issues for change in daily living activities causes strong emotional distress in adults and children. Public health actions, such as social distancing, can make people feel isolated and lonely and can increase stress level and anxiety as well. However, these actions were immediately necessary to reduce the spread of novel coronavirus, but these factors are expected to have a significant impact on the human psyche; as a result, it has contributed to a secondary mental health epidemic. [1-3] There is emerging evidence of the psychological impact of COVID-19 on populations, both directly due to the distress accompanying confirmed cases in individuals and their loved ones and indirectly due to population health interventions such as quarantine. It should be emphasized that the majority of people are not expected to suffer from...
mental disorders emerging from the pandemic and its impact. However, a significant percentage will experience intense emotional adjustment reactions, including fear of contagion, impact of prolonged quarantine, the death of relatives, or increased social adversity as a consequence of geopolitical instability to civil society associated with the economic crisis. It is known that coping with stress in a healthy way will make you feel better and reflect the same on others and community.

The COVID-19 pandemic has had a negative impact on mental health while stretching psychiatric services to the limit and reducing our ability to respond due to economic downturn. Although the long-term ramifications of the economic downturn are currently unclear and turndown will affect different sectors of society differently, the pandemic threatens a prolonged economic crisis due to costs associated with social distancing measures lasting for months. An economic recession by itself brings the risk of an increase in psychiatric disorders, homelessness, and suicide rates. Uncomplicated depression, anxiety, and substance use disorders are the most common psychiatric disorders worldwide. Psychological sequelae in samples of quarantine or isolation and of health-care suppliers are also instructive; it disclosed varied emotional outcomes, together with stress, anxiety, trauma, depression, irritability, insomnia, fear, confusion, anger, frustration, boredom, and stigma related to quarantine, a number of that persisted when the quarantine was upraised.

Crisis due to post-COVID-19 infection maybe even a lot of to fulfill the standards for posttraumatic disorder risk factors for persistence of medical specialty symptoms postdisaster embody exposure to trauma, minority standing, and low support which may lead to economic crisis. Neurocognitive impairment including impaired attention, concentration, memory, and mental processing speed at 1 year was found in majority of patients with severe acute respiratory distress syndrome. Substantial reductions in quality of life were found in patients with severe acute respiratory syndrome and prolonged mechanical ventilation after discharge from intensive care unit compared to admissions for other reasons. Psychological intervention can support the patient during their recovery phase of COVID-19, but there is a paucity of Indian studies in this area. Hence, the present study was undertaken to assess the efficacy of psychological intervention in patients with anxiety recovered from COVID-19.

**MATERIALS AND METHODS**

**Sample**
The sample consisted of thirty recovered diagnosed patients of COVID-19 who were selected for the study of age group 20–45 years of both the sexes. Sampling technique was purposive sampling. Comorbid psychiatric disorders, vision and hearing impairment, organic pathology, anxiety disorder, substance abuse, and intellectual deficiency or any significant physical illness were excluded from this study.

**Tools**

**Sociodemographic data sheet**
The self-made sociodemographic data sheet was used to collect information of the participants.

**Mental Health Inventory**
Mental Health Inventory (MHI) is a widely accepted measure of overall emotional functioning. The 18-item version is brief and reliable and was used in this study. The MHI gives a total score and four subscale (anxiety, depression, behavioral control, and positive affect) scores since low score on MHI shows poor mental health.

**Psychological intervention**

**Psychoeducation**
The goal of the intervention was to prepare the patients and learn to interpret and react to physical and psychological...
symptoms which were related to recovering from a COVID-19 infection and also patients’ relatives were given information so that prognosis can be better.

**Breathing exercises**
A deep breathing exercise was taught, and patients were explained about the long-term goal and benefits to breathe abdominally as much as possible. The aim was to relax them from the anxiety associated with COVID-19 reinfection as much as possible.

**Autogenic training**
Autogenic training was also given to change the negative views and stress and to self-enhance themselves with positive affirmative statements by giving autosuggestion which helps to control behavior and had positive control on them.

**Activity scheduling**
The goal of daily living activity schedule and behavioral assessment was to promote physical, social, and recreational as well as occupational activities so that their physical and mental well-being can be maintained.

**Social support and emotion regulation strategies**
Due to lack of knowledge about COVID-19 infection, patients who recovered from infection were stigmatized, and because of the isolation, they were more emotionally weak. The goal of social support and emotional regulation techniques was to involve them back in society and get proper emotional support from families and society and enable the patients to utilize their broader spectrum of society.

**Procedure**
After obtaining permission from the institutional ethical committee, a total of thirty patients recovered from COVID-19 were selected for the study. After explaining the objectives of the study, written informed consent was obtained from the participants. Initially, sociodemographic data sheet was filled. After that, they were administered the MHI. Thereafter, psychological intervention was given to them. The intervention was done for 30 min twice a week for 1 month, after that again postassessment was done to assess the efficacy of psychological intervention [Figure 1].

**RESULTS**
Table 1 describes the sociodemographic details of the patients recovered from COVID-19 infection, which shows that maximum patients were male and married and belonged to urban area. Table 2 describes the results of MHI. Postintervention, there was a significant improvement in MHI total and all subscale scores.

**DISCUSSION**
The journey of patients being diagnosed as positive for COVID-19 till recovery is very difficult. Patients fight for their survival and suffered from different psychological issues; as a result, they suffered from disturbed mental health. Even after recovery from COVID-19, many of them are facing anxiety issues and posttraumatic stress disorder-like symptoms from the COVID trauma. The pandemic spread fear, worries, and uncertainty of relatives’ health and fear of reinfection in them. In the context of these issues, the present study was conducted with an aim to see the efficacy of psychological intervention in patients having anxiety problems who recovered from COVID-19. Result showed low scores on MHI, depression, anxiety, and positive affect in patients who suffered from COVID 19 on initial assessment [Table 2 and Figure 2]. Findings reveal a change in statically significant improvement in postassessment scores of MHI, depression, anxiety, behavioral control, and positive affect. Hence, the psychological intervention was observed to improve psychological health of the post-COVID-19 patients.

Study results were consistent with the findings of the previous study, which noted that number of recovered patients of COVID-19 showed psychological issues, commonly anxiety, acute stress, and depression. The psychological intervention played important role rehabilitation in the postacute phase of the illness to reduce distress symptoms and improve psychological health. An earlier study found that behavioral interventions reduce long-term psychiatric morbidity and outpatient care usage,
which has been shown following bedside psychotherapy for critically ill patients. The intervention resulted in significant changes in the patients in terms of their anxiety, depression, psychological health and judgment. Improvement was also noticed in their behavior. Hence they were able to manage their responsibilities which was a big asset to their family. 

Limitations
The study had limitation of a small sample from a single center. In addition, no control group was included.

CONCLUSION
Psychological intervention can play a very important role in improving mental health of patients recovered from COVID-19.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

REFERENCES
1. Srivastava K, Chaudhry S, Sowmya AV, Prakash J. Mental health aspects of pandemics with special reference to COVID-19. Ind Psychiatry J 2020;29:1-8.
2. Chaudhry S, Pooja V, Thakur M, Saldanha D. COVID-19 pandemic anxiety and its management. Acta Sci Neurol 2020;3:39-41.
3. Chaudhry S, Samudra M. COVID-19 lockdown: Psychological aspects. Med J DY Patil Vidyapeeth 2020;13:580-4.
4. Taylor S. The Psychology of Pandemics. Preparing of the Next Global Outbreak of Infectious Disease. Cambridge: Cambridge Scholars Publishing; 2019.
5. Zhou X. Psychological crisis interventions in Sichuan Province during the 2019 novel coronavirus outbreak. Psychiatry Res 2020;286:112895.
6. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. Lancet 2020;395:912-20.
7. Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS, et al. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. Int J Environ Res Public Health 2020;17:E1729.
8. Silva M, Resurrección DM, Antunes A, Frasquilho D, Cardoso G. Impact of economic crises on mental health care: A systematic review. Epidemiol Psychiatr Sci 2018;29:e7.
9. Rogers JP, Chesney E, Oliver D, Pollak TA, McGuire P, Fusar-Poli P, et al. Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: A systematic review and meta-analysis with comparison to the COVID-19 pandemic. Lancet Psychiatry 2020;7:611-27.
10. Veit CT, Ware JE Jr. The structure of psychological distress and well-being in general populations. J Consult Clin Psychol 1983;51:730-42.
11. Rossi A, Panzeri A, Pietrabissa G, Manzoni GM, Castelnuovo G, Mannarini S. The anxiety-buffer hypothesis in the time of COVID-19: When self-esteem protects from the impact of loneliness and fear on anxiety and depression. Front Psychol 2020;11:2177.
12. Jaywant A, Vanderlind WM, Boas SJ, Dickerman AL. Behavioral interventions in acute COVID-19 recovery: A new opportunity for integrated care. Gen Hosp Psychiatry 2021;69:113-4.

Table 2: Mental Health Inventory scores of the participants

| MHI                  | Assessment pre- and post-intervention | n  | Mean | SD   | Wilcoxon signed-rank test |
|----------------------|-------------------------------------|----|------|------|---------------------------|
| MHI                  | Pre                                 | 30 | 3.06 | 0.98 | -4.731*                   |
|                      | Post                                | 30 | 5.40 | 0.72 |                           |
| Anxiety MHI          | Pre                                 | 30 | 2.96 | 1.09 | -4.708*                   |
|                      | Post                                | 30 | 3.23 | 0.77 |                           |
| Depression MHI       | Pre                                 | 30 | 3.03 | 0.99 | -4.692*                   |
|                      | Post                                | 30 | 5.26 | 0.73 |                           |
| Behavioral control MHI | Pre                               | 30 | 3.40 | 1.03 | -4.600#                   |
|                      | Post                                | 30 | 5.63 | 0.55 |                           |
| Positive affect MHI  | Pre                                 | 30 | 2.96 | 0.99 | -4.688*                   |
|                      | Post                                | 30 | 5.16 | 0.87 |                           |

*Significant at <0.05 level. MHI – Mental Health Inventory; SD – Standard deviation