



Review the Effects of Stress on the Healing Process of Patients with COVID-19: A Narrative Review Study

Hosein Bayat^{1*}

¹Department of Psychology, Islamic Azad University, Science and Research Branch, Tehran (Yasouj)

Abstract

Background and Objective: The emergence of a new Coronavirus, causing the COVID-19, which got started from China with a subsequent rapid spread of the virus in various parts of the world, has been considered as a pandemic. It has raised a great concern in various countries facing large numbers of infected people, presenting with mild manifestations in most cases and sometimes severe and complicated cases and death. As there is not any specific treatment for the COVID-19 treatment, most medical centers rely on the supportive medical intervention in these patients. In this regard, all aspects of the human body could be effective in the process of treatment, as well as nutrition, sleep quality, and psychological issues like stress control.

Method: In this review, keywords such as stress, treatment, and Covid-19 used to search in Google Scholar, PubMed, ScienceDirect, Web of Science, Ovid Medline, WHO, Articles, and dissertations received during 2020, and finally 12 sources were selected and critiqued, interpreted, and analyzed.

Results: Our study showed that COVID-19 exposes patients to constant and chronic stress. Regardless of patients, all society members could experience more stress due to the implication of health measures such as social distancing and home quarantine.

Conclusion: While in patients this feeling of stress is extremely high; considering stress management programs as well as managing the patient physical activity and providing proper nutritional support, may be helpful in the improvement of COVID-19 through stress management.

Keywords: Stress, Treatment, COVID -19.

Background and Objective

In late December 2019, a new coronavirus, called the New Coronavirus-2019 (SARS-CoV-2), causing Coronavirus disease 2019 (COVID-19), raised a worldwide outbreak of a respiratory disease-causing Severe Acute Respiratory Syndrome (SARS)^{1,2}. Common symptoms of the disease include fever, cough, and shortness of breath, and muscle pain³. Although the majority of cases of this disease cause mild symptoms, some cases progress to pneumonia and multiple organ failure⁴. The mortality rate is estimated at between 1% and 5.5% but varies with age and other health conditions^{4,5}. The disease is being spread mainly through small droplets from infected people when they cough or sneeze⁶. The time between exposure to the disease and the onset of symptoms is between 2 and 14 days. Washing hands and other hygiene measures are suggested to prevent COVID-19 infection⁷. COVID-19 poses major threats to global health⁸.

*Corresponding Author: Hosein Bayat

Email: Drcorespond@gmail.com

The essence of the disease is such that it exposes patients to permanent and chronic stress. This happens mainly due to fear of people from the pandemic and subsequently challenges that COVID-19 has imposed on people's lives as well as that measures such as social distancing, home quarantine, reduced physical activity, and personal communication exacerbate the condition⁹.

The effect of health measures such as social distancing and home quarantine may bring more burden of stress on all members of society. While this feeling of stress is extremely higher in patients, considering stress management programs as well as managing patient physical activity and providing adequate nutritional support can help to improve COVID-19. The present study was conducted to review the effect of stress on the recovery of patients with COVID -19.

Method

In this study, which was conducted using the Narrative Review method, using keywords including stress, treatment, COVID-19 through search in international scientific databases including Pub Med, Web of Science, Google Scholar, Scopus, Elsevier, and internal scientific databases include: Barakatks Knowledge System, Jahad Daneshgahi Scientific Database, Iranian Medical Library (medlib), National Magazine Database (magiran), Knowledge reference (civilica) and search on the WHO site. A total of 25 scientific sources, including books, articles, dissertations, and reports published in 2020 in Persian and English on stress, treatment, and COVID-19, were collected. Unrelated sources and articles were removed and sources related to our review were studied. Finally, 22 articles and scientific sources were selected, and according to the purpose of the study 12 articles analyzed.

Results

Fear and stress get an increase when efforts are made to fight a disease that is not well known. This uncertainty can create a stressful, worrying, and sometimes scary environment. With proper planning, training and protective equipment, many infections can be prevented. Meanwhile, the spread of coronavirus has put a lot of pressure. Lack of preventive facilities and their high prices have caused psychological stress in societies.

Fear of COVID-19 has worsened anxiety and insomnia in people with anxiety disorders or depression, and people under house quarantine who were regularly visiting psychological clinics have reported that symptoms such as claustrophobia are getting worse.

Insecurities and complaints about the virus and quarantine are normal, but if the symptoms become too long, people should seek medical help. Getting the right information and maintaining a regular lifestyle, which includes frequent hand washing and maintaining daily activities, can help us stay in good spirits in difficult times.

Physical reactions to COVID-19 include increased heart rate, sweating, dry mouth, tremors, dizziness, shortness of breath, headache and muscle aches, irritability, fatigue, gastrointestinal upset (indigestion, nausea, constipation, diarrhea), frequency, decreased energy, feeling tired, difficulty sleeping, changes in appetite⁴. The cognitive component includes thoughts and beliefs about the person being injured or losing control of the situation. Therefore, stress leads to decreased thinking ability, decreased ability to pay attention and focus, problems with memory and recall of content, magnification, and catastrophization of problems⁸. Emotional

reactions towards the COVID-19 disease include fear, anxiety, and sadness, loss of interest in routine pleasurable activities, feelings of frustration, irritability, anger, and feelings of helplessness⁸. Behavioral responses that may be seen in people encounter COVID-19 include avoiding specific situations, repeated questions about how things are going, constantly looking for clutter, blaming others, spreading rumors, alcohol and drug abuse, and so on. In the current situation, the coronavirus is worrisome and needs attention and care, especially when we feel threatened and unable to cope.

This virus arrived at a large Chinese city and then spread rapidly to the provinces/regions of all around China and even the whole world. This attracted worldwide attention and has been widely covered by the news for a long time. The news may have caused the general public to feel anxious. The use of instant messaging technology and cell phones is making news spread faster and exacerbating public anxiety and fear. This mental disorder caused by over-coverage is known as "headline stress disorder." This was first described by psychologist Dr. Steven Stossney as a high emotional response to endless reports from the news media, such as feelings of anxiety and stress.

Although this is not a medical diagnosis, continued anxiety or stress may lead to physical disorders such as palpitations, chest tightness, and insomnia, and further development may lead to physical and mental illnesses such as anxiety, depressive, endocrine, and hypertension disorders^{10,11}. Public anxiety and fear are often attributed to dramatic media coverage, and this type of coverage can lead to stress and panic among the general public. This is important because concerns about media coverage may re-emerge during a health crisis¹².

Discussion

According to medical guidelines in China, some patients with severe COVID-19 need to be treated in hospitals and isolated rooms. Due to social isolation, insecurity, physical discomfort, side effects of the drugs, fear of transmitting the virus to others, and extensive news coverage through media, all may cause patients to feel loneliness, anger, anxiety, depression, insomnia, and post-traumatic stress disorder may happen¹³, which can negatively affect people in terms of social and occupational performance and quality of life¹⁴. To date, no studies on this pattern of post-traumatic stress disorder have been reported in patients with COVID-19. With the increase in the number of infected cases and mortality, many patients have experienced both physical and psychological suffering. In China, a wide range of guidelines and consensus has been developed by health professionals and these guidelines are widely used as an online training and counseling service¹⁵.

As reviewed in study of Remuzzi et al., the prevalence of stress symptoms after the COVID-19 outbreak would be significant. Most COVID-19 survived patients may experience the suffering from anxiety and significant stress. Symptoms of stress before discharge and during treatment may lead to negative results in treatment and slow recovery. Following the outbreak of SARS in 2003, the prevalence of post-traumatic stress disorder (PTSD) in SARS survivors was 9.9% in the initial recovery phase, and 25.6% in the 30 months later. The rapid rate of COVID-19 transmission along with cover news about hygiene behaviors in widely-used communication programs (eg, social media), and social discrimination against patients COVID-19 may increase the prevalence of stress symptoms and increase the recovery time of these patients and prolong the hospital stay¹⁶.

Cascella et al. and also the Xiang et al. stated a specific point that only half of the patients had a positive attitude towards mental health services at the time of the COVID-19 outbreak. Many critically ill and at-risk COVID-19 patients were elderly patients and did not have access to the Internet or smartphones due to poor health during hospitalization^{13,17}. Compared to psychological interventions performed in patients' wards, online guidance of psychological resources and motivational and therapeutic massages can be especially effective for people with home isolation and quarantine, but problems and physical discomfort caused by COVID-19 and the side effects of treatment are one of the barriers to receiving information from these sources.

The mass media constantly insists on people about being careful and their warnings may affect society by causing fear and stress. One of the reasons why there are more fear and concern about Corona is due in part to the uncertainty that has arisen in society due to problems with the executive apparatus, such as the distribution of certain items. There is a kind of broken relationship between the people and the officials and the media, and the people.

Conclusion

As reviewed in the present study, the relationship between the mass media, people, and the official policymakers should be modulated in an outbreak to achieve the most proper outcomes of infectious disease control with the lowest damage to society. This damage starts from fear, stress, and possible psychological discomforts toward the disease in healthy people and also COVID-19 patients. While the disease itself has not very high mortality and morbidity rate, the level of stress imposed on society may leave hidden damages. So we suggest further evaluations about the psychological

effects of the COVID-19 outbreak, in patients during treatment, after discharge, a long time later after discharge and also in healthy people or subjects who have lost one of the family members due to COVID-19.

Competing Interests

The authors declare no competing interests.

Authors' Contributions

The authors contributed equally to the writing of the article

References

1. Gorbalenya AE. Severe acute respiratory syndrome-related coronavirus—The species and its viruses, a statement of the Coronavirus Study Group. *BioRxiv*. 2020.
2. Hui DS, Azhar EI, Madani TA, Ntoumi F, Kock R, Dar O, et al. The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health—The latest 2019 novel coronavirus outbreak in Wuhan, China. *International Journal of Infectious Diseases*. 2020;91:264.
3. Bai Y, Yao L, Wei T, Tian F, Jin D-Y, Chen L, et al. Presumed asymptomatic carrier transmission of COVID-19. *Jama*. 2020.
4. Xu Z, Shi L, Wang Y, Zhang J, Huang L, Zhang C, et al. Pathological findings of COVID-19 associated with acute respiratory distress syndrome. *The Lancet respiratory medicine*. 2020;8(4):420-2.
5. Zhou F, Yu T, Du R, Fan G, Liu Y, Liu Z, et al. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *The Lancet*. 2020.
6. Zheng Y-Y, Ma Y-T, Zhang J-Y, Xie X. COVID-19 and the cardiovascular system. *Nature Reviews Cardiology*. 2020:1-2.

7. Zu ZY, Jiang MD, Xu PP, Chen W, Ni QQ, Lu GM, et al. Coronavirus disease 2019 (COVID-19): a perspective from China. *Radiology*. 2020:200490.
8. Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *The Lancet*. 2020;395(10223):507-13.
9. Velavan TP, Meyer CG. The COVID-19 epidemic. *Trop Med Int Health*. 2020;25(3):278-80.
10. Batelaan NM, Seldenrijk A, Bot M, van Balkom AJ, Penninx BW. Anxiety and new onset of cardiovascular disease: critical review and meta-analysis. *The British journal of psychiatry*. 2016;208(3):223-31.
11. Liu M-Y, Li N, Li WA, Khan H. Association between psychosocial stress and hypertension: a systematic review and meta-analysis. *Neurological research*. 2017;39(6):573-80.
12. Pfefferbaum B, Newman E, Nelson SD, Nitiéma P, Pfefferbaum RL, Rahman A. Disaster media coverage and psychological outcomes: descriptive findings in the extant research. *Current psychiatry reports*. 2014;16(9):464.
13. Xiang Y-T, Yang Y, Li W, Zhang L, Zhang Q, Cheung T, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *The Lancet Psychiatry*. 2020;7(3):228-9.
14. Monson E, Caron J, McCloskey K, Brunet A. Longitudinal analysis of quality of life across the trauma spectrum. *Psychological Trauma: Theory, Research, Practice, and Policy*. 2017;9(5):605.
15. Li W, Yang Y, Liu Z-H, Zhao Y-J, Zhang Q, Zhang L, et al. Progression of Mental Health Services during the COVID-19 Outbreak in China. *International Journal of Biological Sciences*. 2020;16(10):1732.
16. Remuzzi A, Remuzzi G. COVID-19 and Italy: what next? *The Lancet*. 2020.
17. Cascella M, Rajnik M, Cuomo A, Dulebohn SC, Di Napoli R. Features, evaluation and treatment coronavirus (COVID-19). *StatPearls [Internet]: StatPearls Publishing*; 2020.

Please cite this article as:

Hosein Bayat Review the Effects of Stress on the Healing Process of Patients with COVID-19: A Narrative Review Study. *Int J Hosp Res*. 2019;8 (2).