

REVIEW

Increased nurses' anxiety disorder during the COVID-19 outbreak

Meysam Rad¹ | Mehdi Rad² | Leila Hefazi Torghabeh³ | Nasrin Fatemi^{4,5} |
Mohammad Mehdi Maleki⁶ | Zahra Seifi⁷ 

¹Department of Psychology, Kish International Branch, Islamic Azad University, Kish Island, Iran

²Department of Psychology, South Tehran Branch, Islamic Azad University, Tehran, Iran

³Department of Psychology, Faculty of Educational and Psychology, Alzahra University, Tehran, Iran

⁴Instructor of Department of Counseling, Faculty of Humanities & Social Sciences, Ardakan University, Ardakan, Iran

⁵Faculty of Educational Sciences and Psychology, Shahid Chamran University of Ahvaz, Ahvaz, Iran

⁶Instructor of Pediatric Nursing Department of Nursing, School of Nursing and Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

⁷Department of Psychology, Ardabil Branch, Islamic Azad University, Ardabil, Iran

Correspondence

Zahra Seifi, Department of Psychology, Ardabil Branch, Islamic Azad University, Ardabil, Iran.
Email: Seifi.zahra.psychologist@gmail.com

Abstract

Background: The rapid outbreak of COVID-19 at the beginning of 2020 in the world has put severe physical and psychological pressure on the medical staff of hospitals involved in the care of patients with COVID-19 to the point of risk of PTSD. There was. The aim of this study was to investigate the relationship between the prevalence of COVID-19 and nurses' anxiety disorder.

Methods: This review study was conducted by library method.

Results: As is well known and mentioned everywhere in cyberspace, nurses have lost their mental health and become very anxious during the COVID-19. Serious spread of traumatic psychiatric symptoms in the current situation can lead to damage to the health system.

Conclusions: The need to care for nurses to relieve fatigue for several months and inject hope and motivation into this group should be understood, But due to the economic situation of the country, unfortunately, the fulfillment of the promises has been delayed, which we hope will be fulfilled soon; Although the delay will certainly not prevent nurses from properly caring for patients, but resolving nurses' livelihood problems should also be a priority on the authorities' agenda.

KEYWORDS

anxiety disorder, COVID-19, nurses

At the end of December 2019, an outbreak of a new viral disease was reported in Wuhan, China, caused by a novel coronavirus that was officially named COVID-19 by the World Health Organization (WHO) (Kamran & Naeim, 2021a; Kamran et al., 2021a; Naeim & Rezaeisharif, 2021a, 2021b; Naeim et al., 2021a). The COVID-19 outbreak was unique because of its speed of transmission, which created a global health emergency in less than a few months around the world. Not only does it cause public health concerns but it also causes several

psychological conditions, including anxiety, fear, depression, labeling, avoidant behaviors, irritability, sleep disturbance, and posttraumatic stress disorder (PTSD). In these circumstances, maintaining mental health is essential because people in different parts of society may experience stressful stimuli during the release of COVID-19. Individuals in different parts of a community may experience psychological symptoms of COVID-19 during the increased phase of the disease, including patients with COVID-19, quarantined individuals, health care

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2022 The Authors. *Brain and Behavior* published by Wiley Periodicals LLC.

workers, and family members of medical staff, children, and students (Kamran et al., 2020; Kamran et al., 2021; Naeim, 2020; Naeim & Rezaeisharif, 2021b; Naeim et al., 2020).

The rapid outbreak of COVID-19 at the beginning of 2020 in the world put severe physical and psychological pressure on the medical staff of hospitals involved in the care of patients with COVID-19, to the extent that the risk of PTSD increased for this group. The study of “the incidence of post-traumatic stress disorder in the staff of COVID-19” shows that medical staff, including nurses, suffer a lot from posttraumatic stress, and their mental health is endangered (Kamran & Naeim, 2021b; Kamran et al., 2021; Kamran et al., 2020; Naeim & Rezaeisharif, 2021c; Naeim et al., 2021b; Naeim et al., 2021a).

Researchers at Shahid Beheshti University of Medical Sciences have studied the issue of “the incidence of post-traumatic stress disorder in nursing staff involved in the care of patients with COVID-19 in Dr. Masih Daneshvari Hospital.” In this study, the amount of physical and psychological stress on medical staff has been analyzed using statistical methods. The statistical population included all nurses and paramedics working in Dr. Masih Daneshvari Hospital in Tehran, during the outbreak of the COVID-19 pandemic in April 2020. Dr. Masih Daneshvari Hospital, since the beginning of the outbreak of COVID-19 in Iran, has been one of the first and most important centers for hospitalization and treatment of patients with COVID-19 in Tehran (Kamran & Naeim, 2021a; Kamran et al., 2021b; Naeim & Rezaeisharif, 2021d; Naeim et al., 2021; Naeim et al., 2021b).

Findings show that out of 311 hospital staff who participated in the study, 69/3% were nurses, 30/7% were health care workers and their mean age was $36/36 \pm 8/7$. Most of the sample members were female, married, childless, with a university degree, and a nurse. Note that 86.7 of the participants did not show any symptoms of COVID-19 at the time of the study, and the results of their own and first-degree family members' corona tests were negative. Most of the sample members had severe PTSD symptoms, and there was no significant difference in the severity of PTSD symptoms between participants with a history of COVID-19 and its absence. The mean PTSD score was severe in all members of the group. There was a significant difference between different age groups in the depression subscale. People in the age group of 20 to 30 years had the highest and in the age group of 31 to 40 years had the lowest score of lack of depression. There was a significant difference between individuals with different marital statuses in the subscales of intrusive memories, inability to control emotions, and PTSD (Kamran & Naeim, 2021b; Kamran et al., 2021a; Naeim & Rezaeisharif, 2021e; Naeim et al., 2020, 2020). Married people had the highest scores on intrusive memories, inability to control emotions, and PTSD. There was no significant difference between the two sexes, people with a different number of children, levels of education, and different job positions in the field of PTSD. Based on the findings of the present study, the mean PTSD score was severe in 88% of all study members and moderate in only 12%. But none of the sample members had mild PTSD, which indicates the depth and severity of the psychological impact of the current crisis on the treatment staff. The highest score among the subscales was related to intrusive memories and the lowest was related to interpersonal problems among all members of

the sample group. This means that the medical staff involved in the care of COVID-19 patients, among the symptoms of PTSD, were more to have recollections of disturbing memories and thoughts about patients, which can have a serious and long-term negative effect on their mental health and functioning (Kamran et al., 2020; Kamran et al., 2021b; Moghadam et al., 2020; Naeim, 2021a; Naeim & Rezaeisharif, 2021c; Naeim et al., 2021; Rezaei et al., 2021).

But applying the lowest score to interpersonal problems can indicate that in these difficult situations, individuals' solidarity increased and they suffered less damage in interpersonal relationships, and this can be a positive point that occurs in crises. Because there was no significant difference in the incidence of PTSD between staff with a history of COVID-19 and its absence, the first hypothesis of the study included a significant difference in PTSD in hospital staff with or without a history of COVID-19 was rejected. These findings indicate a serious spread of PTSD when dealing with a fatal pandemic because the depth of the tragedy of direct exposure to patients with COVID-19 can be somewhat unknown and therefore stressful and it seems to affect everyone in the same way, and in particular causes frequent recalls of unpleasant events in the mind. Foreign studies also show that people living in China's Hubei province, the main center of the COVID-19 outbreak, showed the highest rate of posttraumatic stress symptoms (Kamran et al., 2020; Naeim & Rezaeisharif, 2021b; Naeim et al., 2021; Naeim et al., 2021a, 2021c, 2021c; Naeim et al., 2021; Rezaeisharif et al., 2021).

The second hypothesis of the present study, including the relationship between demographic variables and PTSD in terms of age and marital status, was confirmed. People had the lowest rate of depression in the third decade of life, but the highest rate of depression in the next decade (fourth decade). This can be due to the spread of excitement in early adulthood. But in the next decade, more involvement in society, especially when facing a crisis, can reduce it. The present study also showed that men and women are equally at risk for PTSD in the face of a deadly disease. But, the relative equality of men and women in the face of stressful conditions in the present study is different from other studies. It could indicate that women in Iran have become more adaptable in recent years due to various problems such as war, earthquakes, and economic crises, and do not necessarily react more severely than men in the face of crises such as epidemics (Kamran et al., 2021; Moghadam et al., 2020; Naeim et al., 2021a, 2021b; Naeim et al., 2020).

Mental health is an issue of urgent importance in terms of research into the COVID-19 crisis, and delays in addressing it can lead to adverse consequences. The study showed that hospital staff involved in the treatment of COVID-19 had severe symptoms of PTSD. This issue should be seriously considered for further evaluation of the mental health of the treatment staff of COVID-19 patients (Kamran et al., 2020; Moghadam et al., 2020; Naeim, 2021b; Naeim et al., 2021c, 2021c; Naeim et al., 2021a; Najafi et al., 2021).

The serious spread of traumatic psychiatric symptoms in the current situation can lead to damage to the health system. While efforts are needed in many areas at present, spending time and money on the mental health of at-risk patients as well as society as a whole is a necessity.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data will be available by the corresponding author upon reasonable request.

ORCID

Zahra Seifi  <https://orcid.org/0000-0002-1119-0677>

REFERENCES

- Kamran, A., & Naeim, M. (2021a). Behavioural change theories: A necessity for managing COVID-19. *Public Health*, 197, e4–e5. <https://doi.org/10.1016/j.puhe.2020.10.010>
- Kamran, A., & Naeim, M. (2021b). Managing back to school anxiety during a COVID-19 outbreak. *The Journal of Nervous and Mental Disease*, 209(4), 244–245. <https://doi.org/10.1097/NMD.0000000000001313>
- Kamran, A., Isazadehfar, K., Heydari, H., Azgomi, R. N. D., & Naeim, M. (2021). Risk perception and adherence to preventive behaviours related to the COVID-19 pandemic: A community-based study applying the health belief model. *BJPsych Open*, 7(4), e133. <https://doi.org/10.1192/bjo.2021.954>
- Kamran, A., Malekpour, A., & Naeim, M. (2021). The psychological impact of COVID-19 outbreak on nurses working in Iran. *Addictive Disorders & Their Treatment*, 20(4), 470–471.
- Kamran, A., Naeim, M., & Bagvand, S. G. (2020). Effective recommendations for reducing anxiety and depression caused by COVID-19 outbreak in medical staff. *Archives of Psychiatric Nursing*, 34(4), 192–193. <https://doi.org/10.1016/j.apnu.2020.06.003>
- Kamran, A., Naeim, M., & Rezaeisharif, A. (2020). The COVID-19 outbreak and behavioral changes, public perceptions and psychological responses in Iran. *Archives of Psychiatric Nursing*, 34(6), 458. <https://doi.org/10.1016/j.apnu.2020.08.002>
- Kamran, A., Naeim, M., & Rezaeisharif, A. (2021a). Psychological impacts of COVID-19. *Srpski Arhiv Za Celokupno Lekarstvo*, 149(3–4), 251–252. <https://doi.org/10.2298/SARH200816028K>
- Kamran, A., Naeim, M., & Rezaeisharif, A. (2021b). The ethics in society during the COVID-19 outbreak in Iran. *Ethics, Medicine, and Public Health*, 16, 100617. <https://doi.org/10.1016/j.jemep.2020.100617>
- Moghadam, S. A., Kazemi, R., & Taklavi, S. (2020). Comparing the effectiveness of eye movement desensitization reprocessing and cognitive behavioral therapy in reducing post traumatic stress disorder. *Health Psychology Report*, 8(1), 31–37. <https://doi.org/10.5114/hpr.2019.92305>
- Naeim, M. (2020). Coronavirus disease (COVID-19) outbreak provides a unique platform to review behavioral changes in Iran. *Asian Journal of Psychiatry*, 51, 102090. <https://doi.org/10.1016/j.ajp.2020.102090>
- Naeim, M. (2021a). A study of the social stigma of coronavirus (COVID-19). *Advances in Dermatology and Allergology/Postępy Dermatologii i Alergologii*, 38(5), 899–900. <https://doi.org/10.5114/ada.2021.110113>
- Naeim, M. (2021b). Death from alcohol consumption during the outbreak of COVID-19. *Current Psychiatry Research and Reviews Formerly: Current Psychiatry Reviews*, 17(1), 10–12. <https://doi.org/10.2174/1573412917666210309150223>
- Naeim, M., & Rezaeisharif, A. (2021a). Comparison of emotional intelligence, attachment style, and mental health in addicted and nonaddicted people. *Addictive Disorders & Their Treatment*, 20(4), 463–469.
- Naeim, M., & Rezaeisharif, A. (2021b). Increased consumption of crystal (Methamphetamine) during the COVID-19 outbreak. *Addictive Disorders & Their Treatment*, 4(20), 593–594.
- Naeim, M., & Rezaeisharif, A. (2021c). The COVID-19 outbreak and the problems of children with autism. *Minerva*, 62(1), 2–4.
- Naeim, M., & Rezaeisharif, A. (2021d). The COVID-19 outbreak, high stress, and increased substance use. *Addictive Disorders & Their Treatment*, 20(4), 397–398.
- Naeim, M., & Rezaeisharif, A. (2021e). The role of the family in preventing addiction. *Addictive Disorders & Their Treatment*, 20(4), 479–485.
- Naeim, M., Kamran, A., & Rezaeisharif, A. (2021). Health tips to prevent the spread of COVID-19 to nursing homes. *Aging Medicine and Healthcare*, 12(1), 29–30. <https://doi.org/10.33879/AMH.121.2020.11043>
- Naeim, M., Malekpour, A., & Rezaeisharif, A. (2021). Ignorance has turned the COVID-19 into a social stigma. *Addictive Disorders & Their Treatment*, 4(20), 386–387.
- Naeim, M., Rezaeisharif, A., & Aligholizadeh Moghadam, S. (2021). Reduce depression and anxiety in methadone users with transcranial direct current stimulation. *Iranian Journal of Psychiatry and Behavioral Sciences*, 15(1), e98062. <https://doi.org/10.5812/ijpbs.98062>
- Naeim, M., Rezaeisharif, A., & Bagvand, S. G. (2020). Strategies to reduce the anxiety and depression of nurses in the special wards of COVID-19. *Archives of Psychiatric Nursing*, 34(6), 529–530. <https://doi.org/10.1016/j.apnu.2020.07.028>
- Naeim, M., Rezaeisharif, A., & Bagvand, S. G. (2021a). Determining the effect of transcranial direct current stimulation on depression and anxiety in methadone consumers: A randomized controlled. *Addictive Disorders & Their Treatment*, 20(2), 141–145.
- Naeim, M., Rezaeisharif, A., & Bagvand, S. G. (2021b). The effect of group counseling therapy approach to psychological well-being of adolescent girls treated with methadone in Iran: A randomized controlled trial. *Addictive Disorders & Their Treatment*, 20(3), 189–193.
- Naeim, M., Rezaeisharif, A., & Bagvand, S. G. (2021c). The effectiveness of virtual cognitive-behavioral group therapy on anxiety, stress, and fatigue in Coronavirus Intensive Care Unit nurses. *Minerva*, 62(4), 216–22.
- Naeim, M., Rezaeisharif, A., & Kamran, A. (2021a). COVID-19 has made the elderly lonelier. *Dementia and Geriatric Cognitive Disorders Extra*, 11(1), 26–28. <https://doi.org/10.1159/000514181>
- Naeim, M., Rezaeisharif, A., & Kamran, A. (2021b). Crisis in crisis: COVID-19 and alcohol compete to kill people in Iran. *Addictive Disorders & Their Treatment*, 20(3), 213–214.
- Naeim, M., Rezaeisharif, A., & Kamran, A. (2021c). The role of impulsivity and cognitive emotion regulation in the tendency toward addiction in male students. *Addictive Disorders & Their Treatment*, 20(4), 278–287.
- Naeim, M., Rezaeisharif, A., & Zandian, H. (2020). The relationship between internet addiction and social adjustment, and test anxiety of the students of ardebil university of medical sciences. *Shiraz E-Medical Journal*, 21(11), e99209. <https://doi.org/10.5812/semj.99209>
- Najafi, K., Siahkoucheh, A. Y., Siahkoucheh, A. Y., Bayat, M., Didar, F., & Naeim, M. (2021). Evaluation of the prevalence of psychiatric readmission and associated factors in shafa psychiatric hospital in rasht during 2017–2019. *Addictive Disorders & Their Treatment*, 20(4), 423–428.
- Rezaei, A. M., Naeim, M., Asadi, R., Ardebil, F. D., Bayat, M., & Khoshroo, K. (2021). The predictive role of emotional intelligence, resilience, and personality traits in addiction potential of students at arak university of medical sciences. *Addictive Disorders & Their Treatment*, 20(4), 472–478.
- Rezaeisharif, A., Karimi, A., & Naeim, M. (2021). Effectiveness of the cognitive restructuring approach on irrational beliefs and hopelessness in individuals with a substance abuse disorder: A randomized controlled trial. *Addictive Disorders & Their Treatment*, 20(4), 326–335.

How to cite this article: Rad, M., Rad, M., Hefazi Torghabeh, L., Fatemi, N., Maleki, M. M., & Seifi, Z. (2022). Increased nurses' anxiety disorder during the COVID-19 outbreak. *Brain and Behavior*, 12, e2552. <https://doi.org/10.1002/brb3.2552>