

Increased Risk of Physical Problems Following Sleep Disorders During the COVID-19 Epidemic in Health Care Personnel

Hamed Delam^{1,2}, MSc;
Fatemeh Zare¹, BSc Student

Dear Editor

Coronavirus 2019 (COVID-19) was first developed in Wuhan, China in December 2019 and spread rapidly around the world.^{1,2} In late January 2020, the disease was recognized as the sixth international public health emergency.³ The infection is transmitted from person to person through respiratory secretions and contact with surfaces or people.⁴ In general, infectious diseases constantly threaten human health; especially if they are new, because they are always a potential challenge for the healthcare system around the world.⁵ Health personnel, like other infectious diseases, are at the forefront of the fight against coronavirus. A high percentage of these personnel work night shifts with high workload.⁶ Work-related stress, lack of sleep, and shift work in health care personnel cause sleep disorders and poor sleep quality.⁷ Sleep is a specific behavior and each person is aware of its importance and its appropriate duration, and is rotated by waking up. Also, one of the most important parameters in assessing the quality of life and health status of each person is the quality of sleep.⁸ Sleep is a key factor in a person's physical health and related disorders including poor sleep quality, difficulty sleeping at night, waking up early, circadian rhythm disorders, parasomnia, sleep-related movement disorders, and sleep-related respiratory disorders.⁹ Sleep disorders are physical and mental conditions that cause adverse effects due to poor sleep quality.¹⁰ Sleep disorders have many negative effects on people's lives and lead to physical complications such as increased risk of obesity, diabetes, high blood pressure, increased heart rate, heart attack, and stroke.¹¹ Therefore, during the COVID-19 epidemic and with the increase of work pressure in health care workers, there is a possibility of increasing sleep disorders and consequently increasing physical diseases. Healthcare personnel are the most important group in dealing with the COVID-19 epidemic; therefore, increasing the number of medical staff and reducing the number of work shifts can relieve fatigue and maintain energy levels in them and reduce physical complications in them.

Among the treatment methods for insomnia, we can mention medication; however, because sedatives have side effects such as drowsiness and decreased accuracy, they are not recommended for people such as nurses who always need full alertness during their shift; instead, non-pharmacological therapies such as relaxation techniques can be used. Because relaxation is a relative state of relief from the mental and physical effects of stress which can improve the sleep quality by regulating the hypothalamus and reducing sympathetic and parasympathetic functions.¹² The progressive muscle relaxation technique introduced and used by Jacobsen is an easy, cost-effective method without the need for special equipment; it is one of the best complementary therapies to reduce the effects of mental illness such as anxiety because people in this method, by contracting and relaxing a specific muscle, cause relaxation in different target muscles and increase concentration and pleasant emotions.¹³ In order to improve working conditions, it is also suggested that the chronobiological characteristics of individuals should be considered when planning work shifts and classifying individuals accordingly. This type of chronotype classification is a simple method and takes into account issues such

¹Student Research Committee,
Larestan University of Medical
Sciences, Larestan, Iran

²Department of Nursing, School of
Nursing, Larestan University of Medical
Sciences, Larestan, Iran

Correspondence:

Fatemeh Zare, BSc;
Student of Nursing, Student Research
Committee, Larestan University of
Medical Sciences, Larestan, Iran
Email: fatemeh79zr@gmail.com

Received: 16 October 2021

Revised: 18 November 2021

Accepted: 17 December 2021

as individual circadian differences, sleep habits and performance on a particular day, and ultimately helps to plan work shifts based on these chronobiological characteristics.¹⁴ Another suggestion that can be made in this regard is physical activity because physical activity promotes physical and mental health with the biological and biochemical changes that follow. As a result, they improve the quality of sleep. In addition, physical activity, if repeated frequently, reduces the risk of physical illnesses such as cardiovascular disease, cancer, diabetes, and hypertension by boosting the immune response in the body.¹⁵

Keywords: COVID-19, Sleep, Health Personnel, Nursing

Please cite this article as: Delam H, Zare F. Increased Risk of Physical Problems Following Sleep Disorders During the COVID-19 Epidemic in Health Care Personnel. *J Health Sci Surveillance Sys.* 2022;10(1):142-143.

Conflict of Interest: None declared.

References

- 1 Castro P, Matos AP, Werner H, Lopes FP, Tonni G, Araujo Júnior E. Covid-19 and Pregnancy: An Overview. *Revista Brasileira de Ginecologia e Obstetria.* 2020;42(7):420-6.
- 2 Eidi A, Delam H. Internet addiction is likely to increase in home quarantine caused by coronavirus disease 2019 (COVID 19). *Journal of Health Sciences & Surveillance System.* 2020;8(3):136-7.
- 3 Delam H, Eidi A. WhatsApp Messenger role in Coronavirus Disease 2019 (COVID 19) Pandemic. *Journal of Health Sciences & Surveillance System.* 2020;8(4):183-4.
- 4 Motlagh A, Yamrali M, Azghandi S, Azadeh P, Vaezi M, Ashrafi F, et al. COVID19 prevention & care; a cancer specific guideline. *Archives of Iranian medicine.* 2020;23(4):255-64.
- 5 Suresh V. The 2019 novel corona virus outbreak—An institutional guideline. *Indian journal of anaesthesia.* 2020;64(3):242.
- 6 Wang X, Jiang X, Huang Q, Wang H, Gurarie D, Ndeffo-Mbah M, et al. Risk factors of SARS-CoV-2 infection in healthcare workers: a retrospective study of a nosocomial outbreak. *Sleep Medicine: X.* 2020;2:100028.
- 7 Belingeri M, Paladino ME, Riva MA. Working schedule, sleep quality and susceptibility to COVID-19 in healthcare workers. *Clinical infectious diseases: an official publication of the Infectious Diseases Society of America.* 2020.
- 8 Berteotti C, Cerri M, Luppi M, Silvani A, Amici R. An overview of sleep physiology and sleep regulation. *Drug Treatment of Sleep Disorders.* 2015:3-23.
- 9 Xie Z, Chen F, Li WA, Geng X, Li C, Meng X, et al. A review of sleep disorders and melatonin. *Neurological research.* 2017;39(6):559-65.
- 10 Han Y, Yuan Y, Zhang L, Fu Y. Sleep disorder status of nurses in general hospitals and its influencing factors. *Psychiatria Danubina.* 2016;28(2):176-83.
- 11 Salari N, Khazaie H, Hosseini-Far A, Ghasemi H, Mohammadi M, Shohaimi S, et al. The prevalence of sleep disturbances among physicians and nurses facing the COVID-19 patients: a systematic review and meta-analysis. *Globalization and health.* 2020;16(1):1-14.
- 12 Khajeh HS, Sayadi A, Mobini LM, Heidari S. The effect of Benson's relaxation technique on sleep quality among shift-working nurses in hospitals. 2020.
- 13 Kamkar M-Z, Maghsoudlou A. The effect of progressive muscle relaxation technique on the quality of sleep and fatigue in patients with multiple sclerosis. *Nursing And Midwifery Journal.* 2018;15(12):911-20.
- 14 De Martino MMF, Abreu ACB, Barbosa MFdS, Teixeira JEM. The relationship between shift work and sleep patterns in nurses. *Ciência & saúde coletiva.* 2013;18(3):763-8.
- 15 Soltani Shal R, Aghamohammadian Sharbaf H. Effect of exercise on general health, quality of sleep and quality of life in Ferdowsi University of Mashhad students. *Journal of Inflammatory Disease.* 2013;17(4):39-46.

An article entitled "Readability of English Articles Published in Iranian Medical Journals and their Comparison with Articles Published in English and American Medical Journals in 2018" was published in volume 9 issue 4, October 2021 of our journal, *JHSSS*, authored by Zohreh Shabbooyi and Nasrin Shokrpour. This is to certify that the corresponding author of this article is Dr Nasrin Shokrpour