Letter to Editor

The Need to Pay Attention to the Circadian Rhythm of Sleep during the Pandemic of Covid-19

Soroush Maazinezhad⁰*, Leeba Rezaie, Behnam Khaledipaveh

Sleep Disorders Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran

Received: 10 Dec. 2019 Accepted: 28 Dec. 2019

Citation: Maazinezhad S, Rezaie L, Khaledipaveh B. The Need to Pay Attention to the Circadian Rhythm of Sleep during the Pandemic of Covid-19. J Sleep Sci 2020; 5(1): 39.

The circadian rhythm of sleep (CRS) in humans, as an automatic biological clock, regulates the stages of sleep and wakefulness during 24 hours. However, this is not the only function of this cycle. Research shows that the CRS can play an important role in the process of energy metabolism in the body. There are also hypotheses that it affects diseases such as obesity and diabetes. Disruption of this natural rhythm can lead to metabolic imbalances in the human body and increases the risk of disorders in blood glucose regulation, blood lipids, cardiovascular system, and immune system (1, 2).

At the end of 2019, coronavirus disease (covid-19) spread in China, and at first 2020, it spread around the world, leading to many problems for many countries. Covid-19 has occurred in all age groups and the mortality rate has been high (3, 4). One of the most important tasks of healthcare systems to prevent the spread of this disease is to emphasize the implementation of home quarantine. Unfortunately, when the social media talk about the need for home quarantine, there is no mention of the need to maintain the sleep-wake cycle. In recent months, when covid-19 has become widespread in Iran, people have been living in home quarantine, and it has been observed that the majority of their sleep time and bedtime was irregular. This can be worrying, as a person's immune system is severely affected by the CRS and this can increase the risk of weakened immune system when they need to be strengthened (5). Therefore, it is recommended that during the home quarantine, countries' healthcare systems through social networks provide people with the necessary training in maintaining regular sleep schedule and balance between sleep and wakefulness. These educations can be done through cyberspace and using available social media applications.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

None.

References

- 1. Laposky AD, Bass J, Kohsaka A, et al. Sleep and circadian rhythms: Key components in the regulation of energy metabolism. FEBS Lett 2008; 582: 142-51.
- 2. Huang W, Ramsey KM, Marcheva B, et al. Circadian rhythms, sleep, and metabolism. J Clin Invest 2011; 121: 2133-41.
- 3. Karimian M, Borji M, Otaghi M. Special attention to psychiatric centers in covid-19 pandemic. Arch Clin Infect Dis 2020; e103258. [In Press]
- 4. Yao TT, Qian JD, Zhu WY, et al. A systematic review of lopinavir therapy for SARS coronavirus and MERS coronavirus-A possible reference for coronavirus disease-19 treatment option. J Med Virol 2020; 92: 556-63.
- 5. Lange T, Dimitrov S, Born J. Effects of sleep and circadian rhythm on the human immune system. Ann N Y Acad Sci 2010; 1193: 48-59.

^{*} Corresponding author: S. Maazinezhad, Sleep Disorders Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran Tel: +98 918 358 9980, Fax: +98 83 38365255 Email: smedical90@gmail.com