

Psychological Impact of Post-COVID-19 on Healthcare Workers

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Abstract

This cross-sectional study examined the harmful effects of COVID-19 on healthcare workers' psychological well-being in a resource limited country. This study's results offer an insight into the gravity of the effects of the COVID-19 pandemic and recommend ways to deal with such problems by offering proper strategies. The better understanding of the relationship between anxiety and depression and associated factors such as non-availability of personal protective equipment (PPE), age and co-morbidities will help in dealing with mental health issues.

Keywords: Mental health; Personal protective equipment; Pandemic; Depression

Introduction

Healthcare system goals include prevention of an infection pandemic, as well as provision of high-quality medical care for those infected; pandemics pose a psychological toll associated with social isolation, behavioral, and emotional contagion of fear and anxiety [1]. The proliferation of Corona Virus Disease-19 (COVID-19) that gained worldwide attention in December 2019 led to the declaration of a Public Health Emergency of International Concern (PHEIC) by the WHO Emergency Committee at the end of January 2020 [2]. As of February 2021, there have been over 108 million recorded COVID-19 cases, with almost 2.4 million deaths worldwide [3]. Frontline healthcare providers (HCPs) facing this public health pandemic are put under physical and psychological stress; being at risk of being infected while caring for patients or exposed to patients' environment or biological samples with subsequent transmission to their family members [4]. It is expected that with asymptomatic persons driving continued community transmission, the spread of the disease will be greater with initial estimates of 10–20% of all diagnoses for HCPs.

In the COVID-19 pandemic, HCPs stressors include; enormous workload, nosocomial transmission, inadequate personal protective equipment (PPE), moral dilemma, violence, despair, isolation from the family, making them vulnerable to fear, anxiety, depression, and insomnia. Workplace mental health disorders affect performance, interpersonal communication, productivity, engagement, and job satisfaction. Studies involving healthcare professionals have also shown that job satisfaction is inversely proportional to the intended turnover (ie, within a specific time frame determined by direct (internal) and indirect (external) factors. Employee's decision to voluntarily quit their current job). An analysis of external factors that influence a physician's willingness to cancel includes, among other things, the state of the country's healthcare infrastructure, working environment, the nature of the physician-patient relationship, the level of employment, available employment opportunities, and other environments was included element. Internality influencers, male or female, were age, marriage status, and ability to work. Work-related factors that influenced the willingness to leave include working hours, salary levels, benefits, work stress, emotional involvement, work impact, and awareness of wage fairness [5]. HCPs that function in public health systems and in emergency, primary and critical or critical care settings are more likely to develop psychiatric disorders associated with the COVID-19 pandemic. The general psychological effects associated with the COVID-19 epidemic have been extensively studied, with less focus on the experience of physicians caring for patients (gender, age, marital

status, address, number of dependents, education level). Not guessed. Job characteristics and work experience (employed department or department, job type, location, frequency of shifts, level of experience, number of treatments for critical cases, frequency of treatment for suspicious COVID-19 cases, confirmed Frequency of treatment of COVID-19 cases Cases-19 cases and work of private nature outside the hospital) [6]; History of smoking and presence of chronic health problems.

Factors involved during pandemic causing direct effect on workers

Insomnia is a sleep disorder in which one can have trouble falling and/or staying asleep. Good sleep is important for both physical and mental well-being. According to Hess [7] sleep is "the expression of a predominance of the trophotropic component of the autonomous nervous system and a preventive measure against exhaustion" The present-day notion of a circadian rest-activity or sleep-wake rhythm resonates with his concept of alternating trophotropic and ergotropic states. The trophotropic state and the circadian rest state predominantly involve physiological processes that promote energy conservation and restoration as distinguished from the physiological processes and the functional status of the nervous system that help organisms to expend energy [8, 9]. During sleep, the arousal systems are shut down allowing the brain to fall asleep. The arousal systems include the thalamus, posterior hypothalamus, neuronal aggregates within the brainstem reticular formation, and basal forebrain. The arousal systems stimulate cortical activation through ascending projections to the cortex and this is characterized by high-frequency gamma and low-frequency rhythmic theta activity. The descending projections to the spinal cord stimulate muscle tonus as well as sensory-motor responsiveness and activity [10]. Proper functioning of the arousal systems helps us stay alert and awake. Sleep-wake homeostasis keeps track of the body's requirement of sleep and maintains the sleep-wake cycle.

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Stress is a state of disrupted homeostatic balance. It is triggered by intrinsic or extrinsic stressors or situations that are perceived as a threat to one's well-being. The body counteracts by a range of complex physiological and behavioral responses to reestablish eustasis — the optimal body equilibrium [11]. The adaptive stress response involves an intricate network of neuroendocrine, cellular, and molecular infrastructure. Hypothalamic-pituitary-adrenal (HPA) axis and the autonomic nervous system (ANS) work in tandem with other vital centers in the central nervous system (CNS) and tissues/organs in the periphery to yield a successful adaptive stress response. Dysregulation of the stress system can disrupt the body homeostasis leading to a state of cacostasis (adverse effects) or allostasis (achieve stability). Stress and insomnia are not unitary constructs but these two aspects of mental health are intricately intertwined. Sleep and stress response share a common pathway – the hypothalamic-pituitary-adrenal (HPA) axis. Sleep, especially deep sleep, has an inhibitory influence on the HPA axis whereas; activation of the HPA axis can lead to arousal and sleeplessness [12]. The HPA axis is also responsible for the neuroendocrine adaptation of the stress response [13]. The production of the stress hormone cortisol is triggered by stress-induced activation of the HPA axis. Cortisol is an essential steroid hormone and like many other physiological processes like sleep has a circadian rhythm. In healthy individuals, cortisol levels reach a nadir at midnight and then build up overnight to peak in the morning and then again decline slowly throughout the day. However, when we are under stress the HPA axis gets activated and the adrenal glands release the hormone cortisol into the bloodstream. This prepares the body for the “fight or flight” response which is important for survival. Therefore, on one hand, stress-related activation of the HPA axis might decrease sleep eventually leading to burnout. On the other hand, sleep deprivation can lead to maladaptive changes in the HPA axis and result in neuroendocrine dysregulation. Thus, stress and insomnia might exacerbate each other and create a vicious cycle impacting long term mental health [14].

Cai W [15] found that previous experience in a public health emergency (PHE) was protective against adverse mental health outcomes. Staff that had no previous experience was also more likely to have low rates of resilience, and social support.

One study assessed self-efficacy in dental staff and found that it was a protective factor [16]. Self-efficacy was also found to improve sleep quality by Xiao et al. [17]. This had the biggest impact in reducing stress in a cross-sectional study by Cai H [18].

Conclusion

Improvements in environment, housing conditions, hygiene, personal awareness, and attitudes to minimize cross-infection in all age groups in the community.

Acknowledgement

None

Conflict of Interest

None

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