



# Factors Causing Stress for Health Care Workers During COVID-19 Pandemic

Thiruvenkadam Thiagarajan<sup>(✉)</sup>  and Sudarsan Jayasingh 

SSN School of Management, Sri Sivasubramaniya Nadar College of Engineering,  
Kalavakkam 603110, India  
Thiruvenkadamt@ssn.edu.in

**Abstract.** Healthcare employees face a higher risk of adverse psychological health outcomes during the COVID-19 pandemic. It is critical to comprehend health-care workers' well-being and the factors that most influence their well-being because of the Covid-19 pandemic's impact at the individual, interpersonal, organizational, community, and public levels, as well as some of the motivating and upsetting factors of health-care workers at each level. This study aims to bring out the major factors causing stress for health care workers during the pandemic. The sample size of the study is 84. The results found that fear of infecting family members is the major reason for causing stress. Workers are motivated to save people's lives, but it is other people's ignorance that upsets them the most. The burnout level of the employees was found to be high due to increased working hours and their overall wellbeing has decreased. The study makes recommendations for medical organizations, the general public, and the government to improve their overall well-being by lowering stress levels.

**Keywords:** Burnout · Healthcare · Covid-19 · Pandemic · Socio-Ecological

## 1 Introduction

The novel coronavirus (COVID-19) was first identified in Wuhan, China and quickly spread across the world in December 2019. The first case of COVID-19 reported in India was from Kerala on January 27, 2020 [1]. Many hospitals or health facilities have experienced an influx of COVID-19 patients during this pandemic. The healthcare system across the world and India has been overburdened due to the rapid increase in number of COVID-19 cases which directly impacting the healthcare employee's well-being in different ways [4]. The Healthcare sector is one the most severely affected by the pandemic as those employed in it face multiple hazards that affect their physical, mental and social well-being [8]. Healthcare employees have been found to be higher risk of infection with COVID19 than the general population [5]. World Health Organization's surveillance data reported that 3.45 million deaths due to COVID19 between January 2020 and May 2021 and of these only 6,643 deaths were identified as being a healthcare worker [8]. In view of the evidence that number of deaths due to COVID19 among healthcare employees is greater than official numbers reported.

© The Author(s) 2023

S. Jayasingh et al. (Eds.): ICETBM 2023, AEBMR 242, pp. 73–87, 2023.

[https://doi.org/10.2991/978-94-6463-162-3\\_8](https://doi.org/10.2991/978-94-6463-162-3_8)

Healthcare employees played an important role in responding to the COVID-19 pandemic and had to work overtime and face high risks of infection due to direct contact with patients 3/30/23 7:58:00 PM. Recent research shows that COVID19 significantly affected the mental health and well-being of frontline healthcare employees [9]. It is important to understand the employee well-being of the health care workers and the factors that majorly influence the well-being due to impact of covid-19 pandemic at individual, interpersonal, organizational, community and public policy levels and also it is necessary to understand some of the motivating and upsetting factors of the health care workers. The main aim of the research is to find the factors affecting the psychological well-being of health care workers during COVID19. We attempt to target healthcare employees as they are the frontline workers who are involved in fighting the COVID19.

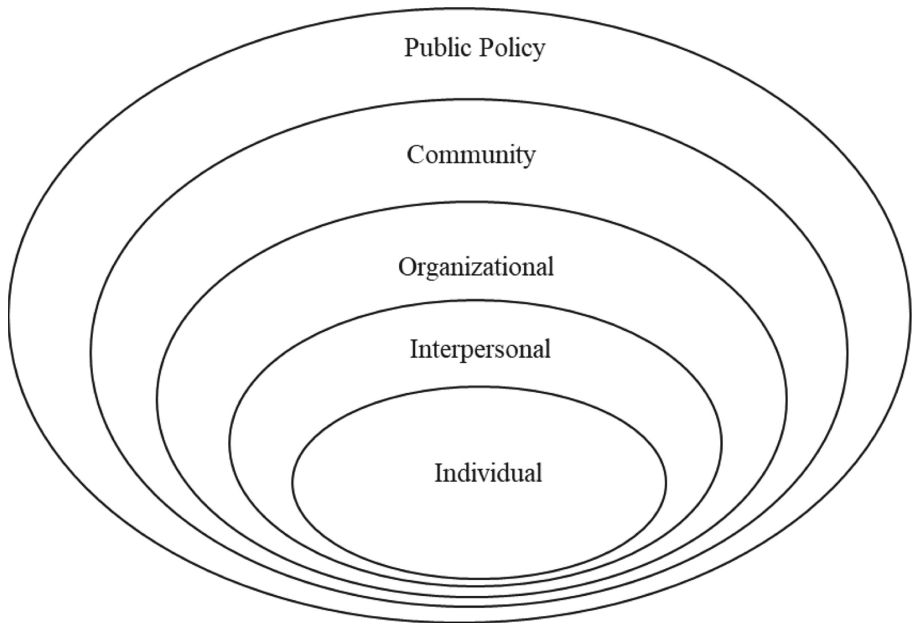
## 2 Literature Review

Several research have already been conducted on healthcare workers' mental health during the covid-19 pandemic. This research studies the impact of COVID19 using social ecological model. Social ecological model (SEM) is one of the widely used model by health-promotion researchers. The social-ecological model is a public health framework, which explains the implications of an individual's social environment, interpersonal relationships and community setting, and personal characteristics on healthcare employee's decision-making behaviour [8] (Fig. 1). According to McLeroy (1988) health is not determined by human factors but it is based on a collection of subsystems that occur at various level [11]. This theory explains a person's behaviour is influenced by five overarching themes: Individual, Interpersonal, Organizational, Community and Structures and Systems.

Many researchers have applied social-ecological model to identify the determinants of the health-related behaviours. Pereira, Padez and Nogueira (2019) [13] applied SEM to study the determinants of childhood obesity. The research finding shows that appropriateness of SEM as a framework to study childhood obesity determinants. Lim and Hoot (2015) [10] applied SEM to study bullying behaviour in school. The results shows that statistically significant differences were found between the level of factors. Aruta, Callueng, Antazo, & Ballada, (2021) studied the impact of socio-ecological factors on the quality of life of Filipino adults during COVID-19 crisis [2]. Their research findings shows that people facing threats to home safety, financial instability, and distrust in public institutions in times of crisis are vulnerable to emotional symptoms, and reduced quality of life.

### 2.1 Public Level Factors

The outermost ring of the social-ecological model is public or societal influence which encompasses a societal view on health outcomes and decision making. Public policy on controlling COVID-19 spread and government spending in reducing the spread of COVID-19. Allocation of funds, policy initiatives that aim to address health behaviours, social equity, and overall infrastructure all are integral in shaping health outcomes.



**Fig. 1.** Social-Ecological Model

## **2.2 Community Level Factors**

The next level of the social-ecological model includes community influences within one's immediate environment, that affect their decision to protect themselves from COVID-19 spread. Cultural values or norms refer to perceived standards of acceptable attitudes and behaviours within networks.

## **2.3 Organizational Level Factors**

The organizational level considers the structured communities to which groups of individuals belong, such as a hospital. Formal guidelines, such as written procedures, or informal guidelines, to protect the employees from COVID-19. Organizations that shape behaviours and attitudes due to their organizational characteristics, regulations, rules (formal and informal), and cultural expectations. This may include safety, social stigma, or health initiatives.

## **2.4 Interpersonal Level Factors**

COVID-19 protection behaviour depends on individual characteristics and personal attitudes which is the innermost level of social ecological model [3].

## **2.5 Individual Level Factors**

Individual behavioural factors represent biological or behavioural characteristics associated with an individual's perception towards infection. COVID-19 prevention efforts

are mainly depends on individual-level behaviour change, like self-isolation, wearing mask and physical distancing.

Burnout is a work-related stress caused due to extensive exposure to job related stress. This was first mentioned by psychoanalyst Freudenberg in year 1970 and it contains of emotional exhaustion, cynicism and depersonalization, reduce professional efficacy and personal accomplishment [6]. Shanafelt et al. [14] research findings shows that physicians show higher burnout than other employees. The study shows the COVID-19 has a considerable impact on the psychological wellbeing of health care employees (HCEs). It is estimated that over 75% of health care employees suffered some form of psychiatric morbidity during COVID-19 epidemic [15]. Among HCEs adverse psychological outcomes, including anxiety, depression, insomnia, and burnout, have been widely reported [12]. Pandemic fatigue is an emerging health concern among frontline healthcare employees due to coronavirus pandemic and the various measures implemented to slow the spread of infection.

### 3 Research Methodology

The study is descriptive in nature. In the month of April 2021, healthcare workers from major healthcare institutions from India were surveyed. The study includes doctors, nurses and non-medical personnel like administrative staff, pharmacists, and technicians etc. A total of 84 participants completed the survey. The primary data was collected in this study using survey questionnaires made in two languages - English and Tamil. In this research, the survey was made with the help of google forms and that survey link generated was distributed to various social media platforms like LinkedIn, Facebook, WhatsApp, Email and posting in different public forums in Facebook. The inferences were made using descriptive statistics.

### 4 Data Analysis

The descriptive information of the sample is provided in the Table 1. The Table 1 shows that majority of the respondents are from 20–29 years old. Most respondents were female (54%), were married (55%), and are doctors and nurse (68%).

#### 4.1 Individual Level Factors

All the healthcare employee participants in the survey mentions that they are responsible to protect people during COVID-19. 93 percent feel stressed wearing PPE kit during working hours. But 33 percent of the respondents feel that they are vulnerable to COVID infections which need to be addressed to improve the well-being of healthcare employees. 85% of the respondents agree that their sleeping patterns have changed during COVID-19. The detail of Individual Level factors are presented in Table 2.

**Table 1.** Respondents Characteristics

| Variable           | Category   | Count (n) | Percent (%) |
|--------------------|------------|-----------|-------------|
| Age                | 20–29      | 38        | 45          |
|                    | 30–39      | 26        | 31          |
|                    | 40–49      | 11        | 13          |
|                    | 50–59      | 9         | 11          |
|                    | 20–29      | 38        | 45          |
| Gender             | Female     | 45        | 54          |
|                    | Male       | 39        | 46          |
| Marital Status     | Married    | 46        | 55          |
|                    | Single     | 38        | 45          |
| Role in Healthcare | Nurse      | 32        | 38          |
|                    | Doctors    | 25        | 30          |
|                    | Pharmacist | 15        | 18          |
|                    | Others     | 12        | 14          |

**Table 2.** Individual Level Factors

| Factors  | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Mean |
|--|----------------|-------|---------|----------|-------------------|------|
| I always wear the mask as per the standards for my personal safety   | 56             | 25    | 3       | 0        | 0                 | 4.49 |
| I am ethical in my workplace   | 53             | 28    | 3       | 0        | 0                 | 4.63 |
| I feel I am responsible to protect people during Covid as I am front line worker                                       | 50             | 32    | 2       | 0        | 0                 | 4.57 |
| Wearing PPE causes discomfort such as breathing trouble, skin irritation, profuse sweating, communication trouble etc. | 46             | 26    | 11      | 1        | 0                 | 4.45 |

*(continued)*

**Table 2.** (continued)

| Factors  | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Mean |
|--|----------------|-------|---------|----------|-------------------|------|
| I wear PPEs whenever required inside the organization                          | 45             | 34    | 4       | 1        | 0                 | 4.6  |
| I keep myself protected against Covid-19                                       | 44             | 37    | 3       | 0        | 0                 | 3.35 |
| I am self - motivated to work during Covid and protect people                  | 44             | 34    | 6       | 0        | 0                 | 4.21 |
| I feel stressed whenever I wear PPE  | 38             | 30    | 11      | 3        | 2                 | 4.2  |
| My sleeping hours have been reduced during Covid                               | 34             | 35    | 14      | 0        | 1                 | 4.2  |
| I follow hygiene routine at regular intervals                                  | 32             | 39    | 12      | 1        | 0                 | 3.11 |
| My sleeping patterns have changed during COVID                                 | 32             | 39    | 12      | 0        | 1                 | 4.46 |
| I feel that my age makes me vulnerable to Covid                                | 17             | 22    | 26      | 9        | 9                 | 4.39 |
| I feel that since I have history of illness which makes me vulnerable to Covid | 14             | 19    | 28      | 8        | 15                | 4.18 |

## 4.2 Interpersonal Level Factors

The survey findings shows that 29% of respondents feels that relatives and friends have distanced from them during COVID pandemic. This will increase the stress level of healthcare employees. 36% respondents feels that they not getting necessary support from friends and family during pandemic which also will increase the stress level of the healthcare employees. 90% of the respondents agree that they are stressed that they might

transmit infection to their family. Details of the interpersonal level factors is presented in Table 3.

**Table 3.** Interpersonal Level Factors

| Factors  | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Mean |
|--|----------------|-------|---------|----------|-------------------|------|
| I am worried about my family's safety due to Covid   | 59             | 23    | 2       | 0        | 0                 | 4.68 |
| I am stressed that I might transmit infection to my family   | 52             | 24    | 6       | 0        | 2                 | 4.48 |
| I am unable to take care of my family due to Covid   | 45             | 30    | 7       | 2        | 0                 | 4.4  |
| I am unable to spend quality time with my family due to self-quarantine after work due to Covid        | 43             | 30    | 10      | 0        | 1                 | 4.36 |
| I feel my relatives and friends have distanced from me since I am health care worker during Covid      | 22             | 38    | 17      | 4        | 3                 | 3.86 |
| Any news of infection to friends or relative is stressing me out                                       | 38             | 33    | 13      | 0        | 0                 | 4.3  |
| I am unable to concentrate on other family elements as I am health care worker involved to help people | 39             | 30    | 10      | 4        | 1                 | 4.21 |

(continued)

**Table 3.** (continued)

| Factors  | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Mean |
|--|----------------|-------|---------|----------|-------------------|------|
| I am able to provide necessary knowledge on precautionary steps to be taken to my friends and family against Covid   | 38             | 37    | 7       | 1        | 1                 | 4.31 |
| I am getting necessary social support from friends and family during Covid   | 21             | 33    | 24      | 4        | 2                 | 3.8  |
| My family, friends and relatives are grateful towards me as I am one of the front-line worker fighting against Covid | 27             | 38    | 17      | 1        | 1                 | 4.06 |

**4.3 Organizational Level Factors**

The survey findings shows that 48 percent feels that human resources available to cover the shifts is not sufficient. This leads to long working hours and thus may lead to stressful working environment. The research finding also reveals that healthcare employees are not getting day off every week. Survey findings also shows that employees are not getting incentives and appreciations for their work. 68% of the respondents are either neutral or disagree that they are getting proper break in between daily working hours.76% of the respondents agree that they feel they are overworking during past one year after COVID emerged. Details of the organizational level factors is presented in Table 4.

**4.4 Community Level Factors**

The survey findings shows that 94% of the respondents agree that seeing people careless makes them anxious.56% of the respondents agree that they feel media is misleading people regarding Covid.71% of the respondents agree that their neighbors are afraid because of them being a healthcare worker during Covid.54% of the respondents agree that they feel society is supporting healthcare workers during Covid. Details of the community level factors is presented in Table 5.



**Table 4.** Organizational Level Factors

| Factors  | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Mean |
|--|----------------|-------|---------|----------|-------------------|------|
| I feel that there are necessary safety measures taken by the organization to protect the workers from Covid-19 | 16             | 33    | 24      | 10       | 1                 | 3.63 |
| I feel that there are adequate PPE's available for the health care workers inside the organization             | 13             | 38    | 18      | 13       | 2                 | 3.56 |
| I feel that there are enough human resources available to cover the shifts in the healthcare                   | 9              | 17    | 18      | 33       | 7                 | 2.86 |
| There are adequate essential facilities available for the healthcare workers inside my organization            | 9              | 27    | 28      | 16       | 4                 | 3.25 |
| I am getting proper break in between daily working hours   | 9              | 18    | 34      | 18       | 5                 | 3.1  |
| I am getting day off regularly every week  | 7              | 23    | 20      | 28       | 6                 | 2.96 |
| There is proper shift working hours followed in my organization  | 11             | 24    | 32      | 12       | 5                 | 3.29 |
| I am getting necessary support from colleagues   | 10             | 37    | 28      | 8        | 1                 | 3.56 |

*(continued)*

**Table 4.** (continued)

| Factors  | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Mean |
|--|----------------|-------|---------|----------|-------------------|------|
| There is proper leadership to guide us during Covid in my organization                                       | 10             | 39    | 22      | 9        | 4                 | 3.5  |
| I am appreciated for my work during Covid by my organization   | 6              | 26    | 27      | 21       | 4                 | 3.11 |
| I feel whenever I over work, I should be paid more   | 10             | 33    | 18      | 15       | 8                 | 3.26 |
| feel that organization is taking necessary actions to take care of employee well-being of healthcare workers | 7              | 23    | 32      | 15       | 7                 | 3.1  |
| My working hours has been increased during Covid   | 23             | 34    | 19      | 6        | 2                 | 3.83 |
| I feel I am overworking during past one year after Covid emerged   | 21             | 43    | 12      | 6        | 2                 | 3.89 |
| I got some form of incentives from the organization during past year as an appreciation for my work          | 7              | 21    | 17      | 11       | 28                | 2.62 |

**Table 5.** Community Level Factors

| Factors   | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Mean |
|---|----------------|-------|---------|----------|-------------------|------|
| Seeing people careless makes me anxious   | 56             | 23    | 5       | 0        | 0                 | 4.61 |
| I feel media is misleading people regarding Covid   | 18             | 29    | 26      | 8        | 3                 | 3.61 |
| I feel media is helping to spread awareness regarding Covid   | 19             | 31    | 31      | 3        | 0                 | 3.79 |
| My neighbors are afraid because of me being a healthcare worker during Covid                              | 16             | 44    | 19      | 3        | 2                 | 3.82 |
| I feel society is supporting healthcare workers during Covid  | 13             | 32    | 28      | 8        | 3                 | 3.52 |
| feel society is appreciating healthcare workers for fighting against Covid                                | 18             | 32    | 27      | 5        | 2                 | 3.70 |
| I feel that society is taking necessary actions to take care of employee well-being of healthcare workers | 12             | 27    | 26      | 14       | 5                 | 3.32 |
| I was declined of shelter as I work in health care organization by the society                            | 10             | 15    | 34      | 15       | 10                | 3.00 |

**Table 6.** Public Level Factors

| Factors  | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Mean |
|--|----------------|-------|---------|----------|-------------------|------|
| I feel government has provided necessary support to fight against Covid                                      | 12             | 26    | 35      | 9        | 2                 | 3.44 |
| I feel that there is proper funding allotted in the nation to fight against Covid                            | 5              | 24    | 35      | 15       | 5                 | 3.11 |
| I feel that there are investments made on health care workers to fight against Covid by the nation           | 5              | 20    | 23      | 26       | 10                | 2.81 |
| I feel that government is taking necessary actions to take care of employee well-being of healthcare workers | 7              | 25    | 36      | 12       | 4                 | 3.23 |

**4.5 Public Level Factors**

The survey findings shows that 45% of the respondents agree that government has provided necessary support to fight against COVID. 42% of the respondents feels that government investment on healthcare employees to fight against COVID is not adequate. Details of the public level factors is presented in Table 6.

The research shows the 83% of the respondents are stressed because of the fear of transmission towards family members. 98% agree that they feel physically exhausted after the shift (Table 7). 95% agree that they feel emotionally exhausted after the shift. 93% agree that there are frequent changes in shift timings after Covid emerged. It is clear that healthcare employees face high level of burnout during COVID-19. The work related and pandemic related burnout found to be higher compared to other studies. Khasne, Dhakulkar, Mahajan and Kulkarni (2020) [7] reported 52.8% pandemic-related burnout, but this study shows 83% burnout. The research shows that women (Mean = 2.08) healthcare employees face higher exhaustion than men (Mean = 2.24).

**Table 7.** Exhaustion of Healthcare Employees

| Factors  | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Mean |
|--|----------------|-------|---------|----------|-------------------|------|
| Daily, I feel physically exhausted after the shift               | 31             | 29    | 22      | 2        | 0                 | 1.94 |
| Daily I feel emotionally exhausted after the shift               | 20             | 38    | 22      | 2        | 2                 | 2.14 |
| Workload is unbearable due to Covid                              | 25             | 37    | 16      | 4        | 2                 | 2.06 |
| There were frequent changes in shift timings after Covid emerged | 17             | 48    | 13      | 5        | 1                 | 2.11 |
| I skip my food due to workload after Covid emerged               | 13             | 23    | 40      | 6        | 2                 | 2.54 |

## 5 Conclusion

This research aims to assess the socio-ecological factors associated with COVID-19 pandemic among the 84 healthcare employees. One of the important areas of concern is related to interpersonal level factors like support from friends and family. Community level factors also found to affect the well-being of healthcare employees due to misleading information in Media and careless attitude of general public. The research also found that human resources available to cover the shifts is not sufficient which leads to high level of stress. The research finding also shows that high level of pandemic related burnout among healthcare employees. One of the main concerns was related to fear of catching the COVID infections and also infecting the family members. It is required to intervene at organization and society level to reduce the burnout of healthcare employees during pandemic.

### 5.1 Implications to Organizations

Organizations may consider the following suggestions for improving the wellbeing of healthcare employees: Increasing the manpower will increase the number of persons per shift, which in turn will reduce the health care workers workload. Reducing the shift hours or making the shift hours as before the pandemic will reduce the exhaustion level. Proper shift management without frequent changes in shift cycles will help in reducing their

stress level. Providing essential facilities as and when needed including proper restroom facilities, drinking water facilities, PPE's and mask will reduce their stress level while during shift. Proper break hours and week-offs will help them refresh themselves amidst of pandemic. As the health care workers are stressed majorly about their family getting infected because of them, proper isolation centers can be provided with essential facilities for health care workers to reside after shift. It is essential for an organization to provide safety for the workers from the public, therefore the organization should have installed surveillance cameras for monitoring and increase the security guards to protect health care workers. Organizations can motivate employees by appreciating the health care workers for their service by rewards, certificates, incentives or words of appreciation, which will definitely improve their performance and reduce stress. Organizations can provide training and stress buster sessions on handling mental health for the health care workers during Covid.

## 5.2 Implications for General Public

Non-Cooperation, ignorance of rules, failing to take safety precautions during Covid is the major upsetting factor for health care workers. Therefore, it is essential that the general public should be responsible for following rules and do not over-burden the health care workers which will reduce their stress level. Providing constant support and showing gratitude and appreciation should be continued by the general public to motivate the health care workers.

## 5.3 Implications for Government

Government should ensure that health care workers are properly supported with funds and essential facilities by regular monitoring. Government should ensure that every organization has proper resources in place necessary to handle the pandemic. Government should ensure that all organizations follow proper shift timings according to the law and do not make their employees overtime work.

## References

1. Andrews, M.A. et al.: First confirmed case of COVID-19 infection in India: A case report. *Indian Journal of Medical Research*. 151, 5, 490 (2020). [https://doi.org/10.4103/ijmr.IJMR\\_2131\\_20](https://doi.org/10.4103/ijmr.IJMR_2131_20).
2. Aruta, J.J.B.R. et al.: The mediating role of psychological distress on the link between socio-ecological factors and quality of life of Filipino adults during COVID-19 crisis. *Journal of Community Psychology*. 50, 2, 712–726 (2022). <https://doi.org/10.1002/jcop.22668>.
3. Casola, A.R. et al.: Mask Use During COVID-19: A Social-Ecological Analysis. *Health Promot Pract*. 22, 2, 152–155 (2021). <https://doi.org/10.1177/1524839920983922>.
4. Chakma, T. et al.: Psychosocial impact of COVID-19 pandemic on healthcare workers in India & their perceptions on the way forward - A qualitative study. *Indian J Med Res*. 153, 5 & 6, 637–648 (2021). [https://doi.org/10.4103/ijmr.ijmr\\_2204\\_21](https://doi.org/10.4103/ijmr.ijmr_2204_21).
5. Chew, N.W.S. et al.: Asian-Pacific perspective on the psychological well-being of healthcare workers during the evolution of the COVID-19 pandemic. *BJPsych Open*. 6, 6, e116 (2020). <https://doi.org/10.1192/bjo.2020.98>.

6. De Hert, S.: Burnout in Healthcare Workers: Prevalence, Impact and Preventative Strategies. *Local Reg Anesth.* 13, 171–183 (2020). <https://doi.org/10.2147/LRA.S240564>.
7. Khasne, R.W. et al.: Burnout among Healthcare Workers during COVID-19 Pandemic in India: Results of a Questionnaire-based Survey. *Indian J Crit Care Med.* 24, 8, 664–671 (2020). <https://doi.org/10.5005/jp-journals-10071-23518>.
8. Krug, E.G. et al.: The world report on violence and health. *The Lancet.* 360, 9339, 1083–1088 (2002). [https://doi.org/10.1016/S0140-6736\(02\)11133-0](https://doi.org/10.1016/S0140-6736(02)11133-0).
9. Lai, J. et al.: Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. *JAMA Network Open.* 3, 3, e203976 (2020). <https://doi.org/10.1001/jamanetworkopen.2020.3976>.
10. Lim, S.J.J., Hoot, J.L.: Bullying in an increasingly diverse school population: A socio-ecological model analysis. *School Psychology International.* 36, 3, 268–282 (2015). <https://doi.org/10.1177/0143034315571158>.
11. McLeroy, K.R. et al.: An ecological perspective on health promotion programs. *Health Educ Q.* 15, 4, 351–377 (1988). <https://doi.org/10.1177/109019818801500401>.
12. Pappa, S. et al.: Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Brain Behav Immun.* 88, 901–907 (2020). <https://doi.org/10.1016/j.bbi.2020.05.026>.
13. Pereira, M.M.C.E. et al.: Describing studies on childhood obesity determinants by Socio-Ecological Model level: a scoping review to identify gaps and provide guidance for future research. *Int J Obes (Lond).* 43, 10, 1883–1890 (2019). <https://doi.org/10.1038/s41366-019-0411-3>.
14. Shanafelt, T.D.: Enhancing meaning in work: a prescription for preventing physician burnout and promoting patient-centered care. *JAMA.* 302, 12, 1338–1340 (2009). <https://doi.org/10.1001/jama.2009.1385>.
15. Weiss, D., Marmar, D.: *Assessing Psychological Trauma and PTSD: A Handbook for Practitioners.* Guilford Press, New York (1997).

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

