

COVID-19 HEALTHCARE WORKER BURNOUT: WORK ENVIRONMENT AND WORKLOAD AS INFLUENCING FACTORS

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Abstract

The COVID-19 pandemic is an unexpected event. Hospitals must maintain the burnout level of health workers to maintain optimal energy in providing health services. One way to keep the burnout level of health workers in X Hospital is to pay attention to the work environment and workload. The non-probability sampling method used in this research is quantitative with descriptive research analysis. The analytical method used is multiple linear regression. The results showed that the work environment variables were not good, and workload and burnout were in a relatively high category. Results based on a coefficient of determination of 18.2% burnout in health workers caring for COVID-19 patients at Hospital X are influenced by the physical work environment and workload. This study concluded that the physical work environment and workload significantly affected the burnout of health workers treating COVID-19 patients at X Hospital.

Keywords: *work environment; workload; burnout; health workers*

INTRODUCTION

On January 30, 2020, the World Health Organization (WHO) designated COVID-19 as a pandemic (Gaye et al., 2021; Ruetzler et al., 2020; Sønderskov et al., 2020). Healthcare personnel worldwide, particularly in Indonesia, are at the forefront of supporting and treating patients who test positive for COVID-19, regardless of whether they are asymptomatic, mildly ill, or severely affected. The daily surge in COVID-19 cases has overwhelmed all referral institutions designated for COVID-19 treatment. In the context of staff development within organizations, especially hospitals, numerous challenges have emerged.

Yıldırım and Solmaz (2020) indicate that the mortality rate associated with COVID-19 is alarmingly high, leading to various challenges for hospital staff, particularly psychological issues such as stress, anxiety, depression, and fear. Physicians are among the healthcare professionals significantly affected by burnout. (Amanullah and Shankar, 2020; Cubitt et al., 2021; et al., 2020; Karacic et al., 2021; Launer, 2020). Both doctors and nurses experienced considerable burnout during the COVID-19 pandemic (Galanis et al., 2021). This burnout is a critical concern as it adversely affects patient care and hospital services. The second wave of COVID-19, marked by the Delta variant, has further strained healthcare systems and personnel, with one-third of nurses who served during the pandemic reporting psychiatric issues (Maqballi et al., 2021).

Hospital X, the focus of this study, aims to modify its work environment to effectively accommodate COVID-19 patients. However, due to its location in a remote area, the physical work environment currently in place remains inadequate and does not adhere to the guidelines set forth by the Indonesian Doctors Association: Standards for Doctor Protection in the COVID-19 Era (Ginanjar, 2020). In June, July, and August of 2021, the Indonesian Ministry of Health reported a surge in

COVID-19 cases, attributed to the Delta variant, which is known to be twice as contagious and lethal. In addition to the challenges posed by the Delta variant, Hospital X is also facing a shortage of healthcare workers, further exacerbating the workload for the existing staff.

Suboptimal workloads and insufficient rest periods can lead to physiological issues for workers (Çınar et al., 2021; Liu et al., 2020; Theorell, 2020). Pratama (2019) demonstrated that the physical work environment has a significant and positive influence on job fatigue (burnout). Sari and Johansyah (2020) assert that workload significantly affects burnout. This research aims to evaluate the impact of the work environment and workload on the burnout experienced by healthcare personnel during the COVID-19 pandemic at Hospital X.

Human resource management is the science of managing people, encompassing employee recruitment, selection, acquisition, training, and motivation (Sedarmayanti, 2013). According to Dessler (2015), human resource management involves the processes of training, acquiring, and recruiting employees to address employment issues, health, safety, and other matters related to the needs and rights of workers. Robbins and Judge (2015) define human resource management as a branch of management studies that focuses on the recruitment, training, motivation, and retention of employees. Furthermore, McShane and Glinow (2018) state that organizational behavior seeks to predict potential outcomes in the workplace.

Fajri, et al. (2017) stated that the physical work environment encompasses all facilities and infrastructure surrounding workers, which can influence job performance. Sedarmayanti (2013) elucidated that the dimensions of the physical work environment include work equipment, air circulation, lighting, noise, and workspace layout. According to Robbins and Coulter (2010), employees cannot perform their tasks effectively without the necessary tools. Vanchapo (2020) explained that workload refers to the body's capacity to handle work. Workers need to maintain their health and avoid self-harm, making it crucial to align the workload with the work environment. Tarwaka (2014) further elaborated on the dimensions of workload, which include time burden, mental effort burden, and psychological stress burden.

Gibson et al. (2012) define burnout as a psychological process experienced by employees, resulting from fatigue at work. According to Maslach and Jackson (2001), burnout occurs when there is a mismatch between an individual's characteristics or expectations and the prevailing work conditions. Pradana et al. (2017) describe burnout as a state characterized by physical, mental, and emotional exhaustion, which subsequently leads to depersonalization and a diminished sense of personal accomplishment due to occupational stress. Greenberg and Baron (2008) further elaborate that burnout comprises three dimensions: physical exhaustion, emotional exhaustion, and mental exhaustion. Smith and Segal (2008), as cited in Prasetya et al., (2021), explain the distinction between work stress and burnout as shown in Table 1.

Table 1. The Difference Between Job Stress And Burnout

Work Stress	Burned out
Excessive emotion	Lack of emotion
Creating conditions of urgency and excessive behavior	Creates helplessness and hopelessness
Lack of energy	Lack of motivation, aspirations, and hopes
Causes anxiety	This leads to paranoia, indifference, and depression.
Severe physical damage	Emotional instability is the main damage.

Smith and Segal in Prasetya et al., (2021)

Bektas and Peresadko (2013) identify two factors that contribute to burnout in the workplace: individual effort and organizational effort. Leiter and Maslach (2017) state that the three consequences of burnout are loss of energy, loss of enthusiasm, and loss of self-confidence. Naz (2016) notes that the impact of burnout on nurses leads to physical and mental health issues, conflicts and marital breakdowns, increased turnover, decreased quality of service, and withdrawal from social interactions and patient care.

METHODS

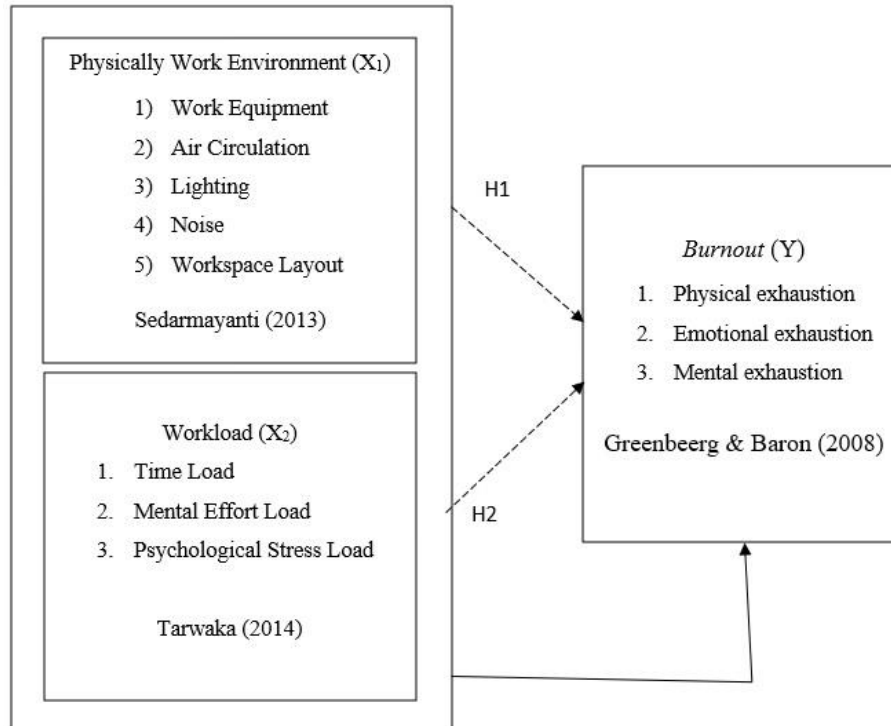


Figure 1. Research Framework

Source: (Greenberg and Baron, 2008), (Sedarmayanti, 2013), (Tarwaka, 2014)

Figure 1 shows the research framework with, the author presents the following hypothesis:

1. The physical work environment significantly contributes to the burnout experienced by COVID-19 healthcare workers.
2. The workload significantly contributes to the burnout experienced by COVID-19 healthcare workers.
3. The physical work environment and workload simultaneously have a significant effect on COVID-19-related burnout among healthcare workers.

This study employs a quantitative descriptive research strategy. The independent variables are the work environment (X₁) and workload (X₂), while the dependent variable (Y) is burnout. The population for this study consisted of all healthcare workers who treated COVID-19 patients from January 2021 to August 2021, totaling 102 healthcare workers. This research utilized a non-probability sampling method. A Likert scale (1–5) was employed for measurement.

RESULTS

Table 2. Total Score of Physical Work Environment Variables

No.	Dimensions	Total score	Ideal Score	Average
1	Work equipment	640	1020	62.7%
2	air circulation	914	2040	44.8%
3	Lightning	528	1020	51.8%
4	Noise	718	1530	46.9%
5	Workspace Layout	667	1530	43.6%
Total		3,467	7.140	48.6%

Source: Processed Primary Data (2022)

Table 2 indicates that the workspace arrangement has the smallest dimension, while the work equipment has the largest dimension. The physical work environment is positioned poorly on the continuum.

Table 3. Total Value of Workload Variables

No.	Dimensions	Total score	Ideal Score	Average
1	Workload	1,141	1530	74.6%
2	Mental Business Expenses	1,660	2040	81.4%
3	Psychological Stress Burden	1.305	2040	64.0%
Total		4.106	5610	73.2%

Source: Processed Primary Data (2022)

According to the statistics presented in Table 3, the highest dimension is time load, while the lowest dimension is the burden of psychological stress. The positioning of the workload variable along the continuum illustrates that the position of the workload variable on the continuity line is situated within the high category.

Table 4. Burnout Variable Total Score

No.	Dimensions	Total score	Ideal Score	Average
1	Physical Fatigue	1,840	2040	90.2%
2	Emotional Burnout	1,707	2040	83.7%
3	Mental Fatigue	1,464	2040	71.8%
Total		5011	6.120	81.9%

Source: Processed Primary Data (2022)

According to Table 4, the highest level of fatigue is physical fatigue, while the lowest dimension is mental fatigue. The position of the burnout variable on the continuum line illustrates that the burnout variable is situated within the high category on the continuum line.

Table 5. Results of Multiple Linear Regression Analysis

coefficient -					
Model	Nonstandard Coefficients		Standard Coefficient	t	Signature.
	B	std. Error	Betas		
1 (Constant)	23,450	6,760		3,469	001
Physical Work Environment (X ₁)	.180	.090	.182	2,003	048
Workload (X ₂)	.498	.116	.391	4,295	.000

A. Dependent Variable: Burnout (Y)

Source: Processed Primary Data (2022)

According to Table 5, the multiple linear regression equation model is derived as follows:

$$Y = 23,450 + 0.180X_1 + 0.498X_2 \dots\dots\dots(1)$$

This suggests that a more positive workplace environment can lead to fewer individuals experiencing burnout. Conversely, an increased workload is likely to result in a higher incidence of burnout.

According to Table 5, it can be concluded that both the physical work environment and workload factors significantly contribute to burnout among healthcare personnel treating COVID-19 patients at Hospital X.

Table 6. Simultaneous Hypothesis Test Results (F Test)

Model	ANOVA ^{and}				
	Sum of Squares	df	Square Average	F	Signature.
1 Regression	677,795	2	338,897	10,995	.000 ^b
Remainder	3051,428	99	30,823		
Total	3729223	101			

A. Dependent Variable: Burnout (Y)

b. Predictors: (Constant), workload (X₂), physical work environment (X₁)

Source: Processed Primary Data (2022)

The computed F value, as presented in Table 6, is 10.995, accompanied by a significance value of 0.000. It can be inferred that the factors of the physical work environment and workload have a significant concurrent influence on burnout among healthcare personnel treating COVID-19 patients at Hospital X. The R-squared value is 0.182, which corresponds to 18.2%. Therefore, 18.2% of burnout among healthcare professionals managing COVID-19 patients at Hospital X from January 2021 to August 2021 can be attributed to the physical work environment and workload (Table 7).

Table 7. Test Results for the Coefficient of Determination (R²)

Model	Models Summary			
	R	R Square	Adjusted R Square	std. Estimation Error
1	0.426 ₋	.182	.165	5.55180

a. Predictor: (Constant), Workload (X₂), Physical Work Environment (X₁)

Source: Processed Primary Data (2022)

DISCUSSION

Based on the results of the descriptive analysis of the physical work environment, 46.8% of respondents fall into the poor category (Algunmeeyn et al., 2020). An uncomfortable work environment and a lack of rest are significant factors contributing to burnout. Additionally, 73.2% of the workload is classified as high (Zerbini et al., 2020). A high workload among healthcare workers increases anxiety and the risk of mental disorders. According to Restauri and Sheridan (2020), hospitals must ensure that the work schedules of healthcare workers allow for adequate rest. The burnout rate is reported at 81.9%, which is considered high. Cai et al. (2020) identify several signs of burnout in healthcare professionals, including stress, despair, exhaustion, and anxiety. Furthermore, Sun et al. (2020) note that heightened concerns regarding the spread of COVID-19 correlate with increased burnout among healthcare professionals throughout the pandemic.

According to the findings of the data analysis, burnout among healthcare professionals caring for COVID-19 patients in hospitals is significantly influenced by the physical work environment. A t-value of 2.003 and a significance level of 0.048 support these findings. Therefore, the proposed hypothesis, that the physical work environment has a significant effect on burnout in healthcare workers treating COVID-19 patients in hospital X, is supported.

According to research data, burnout among healthcare professionals caring for COVID-19 patients at Hospital X is significantly influenced by workload. A t-count value of 4.295 and a significance level of 0.000 illustrate these findings. Therefore, the hypothesis proposed, that workload has a significant effect on burnout in healthcare workers treating COVID-19 patients at Hospital X from January 2021 to August 2021, is accepted. Satyawati and Soetjningsih (2022) state that as the number of COVID-19 patients increases, healthcare workers must continue to perform optimally as a demonstration of professionalism. A supportive work environment and manageable workload will enable healthcare workers to provide better services and reduce burnout, particularly during surges in patient numbers, especially during the COVID-19 outbreak, consistent with the research conducted by Astutik and Bawono (2024).

CONCLUSIONS

The respondents' evaluations of the physical work environment at Hospital X fall into the unsatisfactory category. The workload of healthcare staff assigned to manage COVID-19 patients at Hospital X is classified as high. Furthermore, the burnout levels of healthcare workers responsible for handling COVID-19 patients at Hospital X are also categorized as high. Simultaneous testing indicates that the work environment and workload significantly influence the burnout of healthcare professionals treating COVID-19 patients at Hospital X, accounting for 0.182, or 18.2%, which is categorized as quite strong. Conversely, the remaining 81.8% of burnout is attributed to unexamined variables, including work-related stress, motivation, compensation, a substantial increase in patient volume, and fear surrounding COVID-19, all of which contribute to burnout among healthcare workers.

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