Research article

The Role of Burnout between Workload, Work Stress, and Employee Performance: Mediation Model

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Abstract.
The purpose of this study was to examine the role of burnout as a mediator between workload, work stress, and employee performance. The study was conducted on all employees of Puskesmas Tikung Lamongan amounting to 68 participants in total. Path analysis was used to test the hypothesised relationships. The results proved that burnout mediates the relationship between workload, work stress, and employee performance. The overall results implied that the balance of workload and prolonged work stress have an impact on burnout and decreased employee performance.

Keywords: employee performance, burnout, workload, work stress

1. Introduction

A Puskesmas or Pusat Kesehatan Masyarakat (community health center) is a health service facility that organizes public health efforts and the first-level individual health efforts, prioritizing promotive and preventive efforts in a work area (Permenkes, 2019). With the existence of a health center in every district/city, it is hoped that all residents will have equal access to health. Each Puskesmas must carry out five essential activities, namely, health promotion; environmental health; maternal, child and family planning health; nutrition services, and disease prevention and control (P2P). Other activities provided by the Puskesmas are outpatient care, emergency services, home care, inpatient care, and normal delivery service. Health workers have a strategic role in providing health care services in which they spend more time with patients and serve them with various needs. The quality of health centers depends on health workers’ performance as the frontline in efforts to health control and care, especially in Puskesmas. This makes the health workers be a valuable human resource or employee asset that their ability is important factor in determining the quality of community health centers.
The good and bad service of healthcare workers in serving patients can be seen from their performance. The employees who have good performance can help the company to achieve the goals. [1] defines performance as the result of work in quality and quantity achieved by an employee in carrying out the tasks according to responsibilities given to him. It shows that the company must be able to provide responsibilities to employees according to their ability or expertise in doing work. According to Permenkes RI number 75 2014, analysis of needs for health workers at Puskesmas is calculated based on workload. Calculation of objective workload needs to be done to find out the actual workload condition [2].

Puskesmas Tikung is a sub-district health center category that participates in providing health services in the National Health Insurance Program. In 2020-2021 Puskesmas Tikung experienced a decline in performance when compared to previous years. This is because the COVID-19 cases have become a big problem for medical personnel as the frontline in handling COVID-19 patients. This condition forces health workers to work hard and fast in handling each case so that the transmission does not become over widespread, every patient can recover, and there are no more cases of death due to the coronavirus. Several studies have identified various factors that cause a decrease in the performance of health workers in the COVID-19 era, including workload and work stress [3], [4], [5], and [6]. Research conducted by [7] on health workers in 8 islands in Indonesia states that 55% of health workers experience stress due to COVID-19 and work pressure.

The workload often occurs as a result of the patient's condition always changing, working hours needed usually exceeds one's ability, however, desire to provide excellent service is very high. [8] states that the workload is the amount of work to be completed by a group or someone at the specified time limit. If an employee can complete and adapt to several duties that have been given then it will not become a workload. However, if an employee is not successful, the duties become a workload. The excessive workload can lead to decreased quality of an individual's performance. According to [9], the workload is something that is felt beyond the ability of the worker to do his job.

Work stress is a form of response both physically and mentally to changes in the work environment that are perceived to be disruptive and cause him to become threatened. Stress condition will affect a person's emotions, thought processes, and physical condition, where the pressure comes from the work environment in which the individual is located. The work environment needs to be managed properly to prevent stressful conditions and encourage high performance. [10] said that work stress at a high level
can significantly reduce employee performance. [11], [12], and [13] have proven that work stress harms on employee performance.

In addition to performance, the workload and work stress faced by health workers during COVID-19 pandemic also have an impact on burnout [6], [14] further impact on employee performance [15]. A study of [14], [16], [17] revealed that workload and work stress have a positive effect on burnout. Burnout has a significant effect on employee performance [18], [19], [20], and [21].

This study aims to examine and analyze the effect of workload, work stress, and burnout on health workers' performance, and to analyze burnout as a mediating variable on employee performance.

2. Literature Review and Hypotheses

2.1. Workload and Employee Performance

Employee workload is a critical determinant of health workers' performance [22], [4]. The workload is something that arises from the interaction between tasks, work environment, skills, behavior, and perceptions of workers [2]. [3] state that workload refers to the intensity of a job assignment. [24] defines workload as the relationship between the resources required to carry out a task and the resources available, if we the resources as time, the requirement was greater than the availability, and we can say that workload was excessive. However, this definition must be elaborated in several directions, including precisely what constitutes a resource (besides time). According to [2], the workload is the process of analyzing the time used by a person or group of people in completing task or group of positions (work unit), which is carried under normal conditions. If a worker can complete and adapt to the tasks given, then it does not become a workload. However, if the worker is not successful then the tasks and activities become a workload. Workload is classified into two, namely physical and mental workload. The physical workload is workload due to muscle activity. Meanwhile, the mental workload is workload due to brain or mental activity. Physical workload indicators include physical demand and effort. Mental workload indicators include mental demand, temporal demand, performance, and frustration level [25].

[26] found that the effect of workload on employee performance can be in the form of positive and negative effects. Based on a study conducted by [13], [27] stated that workload has a significant negative effect on employee performance when the workload goes up, the employee performance will eventually decline. But according to
workload has a significant positive effect on employee performance. This means that the appropriate workload, the more significant the performance advance in that company. [12], [28] indicate that excessive workload will have an impact on decreasing the quality of work. Boredom in work or tasks that too little will result in a lack of attention to work thereby potentially endangering workers. Thus, a moderate level of the workload will always increase performance because employees perform their duties effectively [29]. As such, this study hypothesis that:

Hypothesis 1: Workload is negatively related to employee performance.

2.2. Work Stress and Employee Performance

Work stress is feeling pressure faced by employees in the face of work. Job stress is marked by symptoms of emotional instability, feelings of calm, aloofness, hard to sleep, relaxed bias, anxiety, tension and nervousness [30]. Work stress can occur when person faces a task that cannot be reached by an employees ability, for example if an employee’s ability has only reached five but faces a demanding task with a score of nine, then this condition can cause work stress. Furthermore, excessive work stress can threaten a person’s ability to deal with the environment and finally will bother his quality performance [31]. Work stress if not managed properly can result in disability someone interacting positively with the environment and job. The indicators of work stress in this study are as follows [32], task demands, role demands, claims between personal, organizational structure, and organizational leadership.

Some studies have proven that work work stress has a negative impact on performance [33], [34], [12], [13], and [14]. However, this study is not consistent with the result of the study [11], [35] who found that job stress had a positive effect on performance. This confirms that for a company with good stress management, work stress has a positive effect on performance. Based on this, the second hypothesis has been framed:

Hypothesis 2: Work stress is negatively related to employee performance

2.3. Workload and Burnout

The COVID-19 pandemic has caused psychological disorders, especially in health workers. The psychological disorder various forms of the workload from light to heavy. The workload often occurs as a result of the patient’s condition always changing, working hours needed to provide services directly to the patient usually exceeds one’s ability, however, desire to provide excellent service is very high. The high workload can lead to
bad communication between health workers and patients, the failure of collaboration between other health workers. The results of research [36] prove that workload has an effect on burnout to nurses. The same research was conducted by Siregar [37], and [19] proves that workload has positive effect on burnout of health workers.

**Hypothesis 3:** Workload is significantly related to burnout

### 2.4. Work Stress and Burnout

Research conducted by Nasrullah, et al (2020) on health workers in 8 islands in Indonesia states that 55% of health workers experience stress due to COVID-19, very severe stress levels of 0.8%, and mild stress levels of 34.5%. Healthcare providers are at higher risk of mental health during the Covid-19 pandemic. Sources of stress include extreme stress, fear of disease, feelings of helplessness, and trauma from watching COVID-19 patients die alone triggering the risk of suicide of health workers. A survey of 2,132 nurses from all over Indonesia conducted by researchers from the Department of Mental Nursing, Faculty of Nursing UI together with the Research Division of the Indonesian Association of Mental Health Nurses from April to May 2020 showed that more than half of health workers experienced anxiety and depression, some even thought of suicide.

The consistent work stress faced health workers during COVID-19 pandemic is likely to bring burnout. Work stress is a form of response both physically and mentally to changes in the work environment that are perceived to be disruptive and result in him being threatened. Prolonged work stress can lead to depression and if not addressed immediately and tends to take a long time can leave employees with burnout syndrome which is an emotional condition in which a person feels tired and saturated both physically and mentally, as a result of increased job demands [38]. The research conducted by [14] found that there is a significant positive effect between work stress on burnout in health workers.

**Hypothesis 4:** Work stress is significantly related to burnout

### 2.5. Burnout and Employee Performance

Burnout is a physical, mental, and emotional exhaustion that occurs due to stress suffered in the long term, in situations that require high emotional involvement [10]. Burnout is a form of psychological tension or pressure associated with chronic stress, experienced by individuals from day to day and characterized by physical, mental, emotional exhaustion, and low self-esteem resulting in individuals feeling separate
from their environment. Previous studies [19], [20], [21] that examined the effect of burnout on employee performance, stated that workload has a significant relationship between a job burnout and employee performance. The burden of job or task that is felt heavy by employees will reduce the employee’s performance. Individuals with burnout demonstrate a reduction in professional performance, greater probability of medical error, higher rates of absenteeism, lower commitment to a job, also burnout can give the greater probability of biological occupational injury [16].

Hypothesis 5: Burnout is negatively related to employee performance

Hypothesis 6: Burnout mediates the relationship between workload and employee performance

Hypothesis 7: Burnout mediates the relationship between work stress and employee performance

Based on the description above, the conceptual framework of this research can be described in Figure 1 below:

![Figure 1: Research Conceptual](attachment:fig1.png)

3. Research Methods

This type of research is a quantitative research using primary data in the form of a survey. The population in this study was health workers at Puskesmas Tikung Lamongan which numbered 68 people, consisting of 27 nurses, 23 midwives, 2 laboratories, 2 pharmacists, 1 nutritionist, and 13 staff. All of them became the research respondents. In this study, the data were obtained from a questionnaire survey that was distributed to health workers at the Puskesmas Tikung. The research variables consisted of exogenous variables including workload (X1) and work stress (X2); endogenous variables, namely employee performance (Y); and the intervening variable, namely burnout (Z).

The analysis of this study used path analysis with the help of the SPSS Program. Path analysis is a statistical analysis technique developed from multiple regression analysis.
The difference is that path analysis involves standard observational values. The path coefficient significant criterion is less than 0.05. Validity and reliability tests were also used to robust model and estimate.

4. Result and Discussion

4.1. Characteristics of the Respondents

The description of health workers in the Tikung Community Health Center is presented in Table 1.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male: 25 Female: 75</td>
</tr>
<tr>
<td>Education</td>
<td>Diploma: 70.6 Sarjana: 14.7</td>
</tr>
<tr>
<td>Age (30 – 40)</td>
<td>72.05</td>
</tr>
<tr>
<td>Work experience (6-10 years)</td>
<td>80.9</td>
</tr>
</tbody>
</table>

The majority of respondents were female (75%). Most of them graduated with Diploma (70.6%). 72.05% of them were 30-40 years old. They work as the health workers in Puskesmas Tikung with 6 – 10 years of experience (80.9%). In general, health workers’ profiles in the Puskesmas Tikung shows that they had a high potential in providing health care service to the community. They showed that the availability of health workers is still sufficient to meet the needs, with adequate educational qualifications at a relatively young age. The human resources at Tikung Health center are sufficient so that they are expected to be able to provide optimal health service to the community. Puskesmas care services were strongly associated with providing information and education about health. Improving health workers’ quality in Puskesmas is needed to enhance patient satisfaction [39].

4.2. Description of Respondent's Answer

Responses of health workers of workload variables (X1), work stress (X2), burnout (Z), and employee performance (Y) are presented in Table 2. The results of the validity and reliability test show that the items of variables were valid and the research instrument was reliable.
Table 2: Variable Mean Score.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workload (X1)</td>
<td>4.02</td>
<td>High</td>
</tr>
<tr>
<td>Work stress (X2)</td>
<td>2.71</td>
<td>Low</td>
</tr>
<tr>
<td>Burnout (Z)</td>
<td>3.64</td>
<td>High</td>
</tr>
<tr>
<td>Employee Performance (Y)</td>
<td>4.06</td>
<td>High</td>
</tr>
</tbody>
</table>

*Cronbach alpha value is over 0.6*

The mean score of workload health workers at Puskesmas in Tikung sub-district was 4.02, and it is included in the high category. This category indicates that health workers suffered workload at a high level, and they got many problems such as mental distraction, health instability, overnight shift lack of resting, job overloaded, and other additional tasks that are too much handled by one person.

The job stress of the health workers had an average value of 2.71, included in the low category. This score means that the health workers were successful manage their stress. Even though their job demands or pressures are high, they can cope with the work demands placed on them. They also understand which work priorities should come first and which should be postponed. They still could build cooperation with other units. This condition is supported by the management of Puskesmas in creating positive behavior in the workplace. If workers feel a threat or pressure at work or related to a job, they will discuss it with co-workers in a friendly manner. Good relationships with other individuals at Puskesmas had helped the health workers to operate work instruments properly, especially when dealing with critical patients. Building close relationships with patients are also necessary, especially nurses can receive information about the patient’s conditions that a doctor might not know what about. This is useful, for example in the case of death, the nurses could use their knowledge about the patient’s condition to take actions considered necessary for handling the corpse.

Burnout among health workers at Tikung Health Center was in the high category, which is represented by the mean value of 3.64. This score signifies that the burnout of the health workers emerged due to increased activity during the Covid-19 pandemic with the number of existing patients and not proportional to the number of existing nurses. This is recognized by health workers at Puskesmas Tikung because of the increasing number of patients so that health workers spend extra energy in providing health care to the patient. The results of this study also show that health workers are at the level of mild burnout. This is because health workers who are in high mobility and activity coupled with the use of PPE (Personal Protective Equipment). This is considered very burdensome for nurses, but it is an operational standard in carrying out health protocols.
so that they want to don’t want it to be used. Health workers are workers at the forefront of dealing with COVID-19 so it makes the health worker profession has a high level of burnout. The purpose of the burnout in this result is a decrease in body resistance due to the presence of excessive, monotonous physical work activity, and insufficient rest time.

The average score of health workers’ performance is 4.06, and it is categorized as high. This category implies that the health workers at Tikung district Health Center had been able to manage work stress well. Although they still bear a high workload, they successfully control potential conflicts occurs with other individuals. As a result, they can perform their main task, authority, and responsibility optimally.

4.3. Hypothesis Test

The path analysis model in this study is formulated in Figure 1. This model is used to analyze the patterns of relationship between variables, and to examine the direct effect between workload (X1) and work stress (X2) on employee performance (Y), and indirect effects of workload (X1) and work stress (X2) on employee performance (Y) through burnout (Z). Initial tests were done to ensure that the model path was valid and feasible to use. The normality test was carried out with residual regression including multicollinearity and heteroscedasticity test. The overall testing results show that the model is proven feasible and robust to use to explain the relationship between variables. The result of data analysis is shown in the path diagram that includes coefficient values between variables, as presented in Tables 3 and 4.

**TABLE 3: Results of Direct Effect.**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Path Coefficient</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 Z</td>
<td>0.610</td>
<td>0.000</td>
</tr>
<tr>
<td>X2 Z</td>
<td>0.631</td>
<td>0.000</td>
</tr>
<tr>
<td>X1 Y</td>
<td>-0.250</td>
<td>0.049</td>
</tr>
<tr>
<td>X2 Y</td>
<td>-0.241</td>
<td>0.010</td>
</tr>
<tr>
<td>Z Y</td>
<td>-0.421</td>
<td>0.001</td>
</tr>
</tbody>
</table>

*X1 = workload, X2 = work stress, Z = burnout, Y = employee performance*

The path coefficient results in Table 3 show that workload has a positive and significant effect on burnout, with a coefficient value of 0.610 and a significance of 0.000. This result interprets that excessive workload can increase burnout. The result of this study confirms the previous studies of [37] and [19] found that workload positively influenced burnout.
The workstress had a positive and significant effect on burnout. Based on this result, it can be concluded that the higher the level of employee work stresses, it will have an impact on increasing excessive fatigue or burnout. Empirical evidence that is in line with the result of this study was provided by [14], who discovered that job stress positively affected burnout in health workers.

The result of path analysis for a direct relationship between workload and employee performance shows a significant negative effect on employee performance. This result indicates that a high workload can create a low performance for health workers. This study is consistent with the findings of [13]. [27] concluded that disproportionate work-load has an impact on the decline of employee performance. Likewise, the analysis result of job stress and employee performance showed a negative and significant relationship. It can be concluded that the higher the work stress level, the lower performance of health workers. Some studies confirmed this result [33], [34], [12], [13], [14] where they found that job stress negatively affected employee performance.

Burnout is negatively related to employee performance. It can be declared that high burnout can reduce the quality of individual work. Otherwise if workers burnout decreases, the health workers’ performance gets improved. This result is consistent with [15], [20], [21], who found that burnout negatively and significantly influenced performance.

<table>
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<tr>
<td>Z Y</td>
<td>-0.421</td>
<td>0.001</td>
</tr>
<tr>
<td>X1 Z Y</td>
<td>-0.257</td>
<td>0.002</td>
</tr>
<tr>
<td>X2 Z</td>
<td>0.631</td>
<td>0.000</td>
</tr>
<tr>
<td>Z Y</td>
<td>-0.421</td>
<td>0.001</td>
</tr>
<tr>
<td>X2 Z Y</td>
<td>-0.266</td>
<td>0.006</td>
</tr>
</tbody>
</table>

*X1 = workload, X2 = work stress, Z = burnout, Y = employee performance*

The indirect relationship shows that burnout mediates the relationship between workload and employee performance. The result of the path analysis indicates that there is a negative and significant effect between workload on employee performance mediated by burnout (Table 4). This result confirms the study of [17] and [40], who stated that the indirect effect of workload on performance through the mediation of burnout was negative and significant.

The analysis result of an indirect effect of work stress on employee performance through burnout found a negative and significant effect. A previous study with the same
result was conducted by [27] which revealed that burnout mediates the relationship between work stress and employee performance, and the relationship was negative and significant.

Overall, the result of this study means that each workload, work stress, and burnout had a strong effect on health workers’ performance at Puskesmas Tikung district. However, the workload might still be an obstacle due to limited adequate equipment and competent workers. In the past two years (2020 and 2021), the workload of health workers, especially nurses have increased sharply because the number of patients received by Puskesmas has increased. It is related when the number of positive cases increased sharply, the number of health workers at Puskesmas did not increase but instead decreased because some were exposed and had to be isoman. The task of health workers is tougher in addition to carrying out 3T, monitoring cases of self-isolation, also handling cases that arrive with limitations, including managing referrals to hospitals which are apparently not easy. Therefore, the human resources of Puskesmas must be strengthened to provide better upstream service in the health sector. In addition, workload and job stress at high levels can cause mental disorders, psychological anxiety, and fatigue on night shifts.

The workload feels heavy if it is not balanced with the appropriate amount of human resources. A high workload can increase burnout and might force the health workers to suffer psychological problems. The coefficients score of this hypothesis was 0.610. Therefore, the hypothesis that states the workload is significantly related to burnout is accepted. Working conditions in the form of task is not commensurate with the ability both physical, skill and available time, it will be a source of damage workers’ performance. High and low workloads are related to the good and bad performance of health workers. relates to the low and high health workers performance. The result of the analysis on the hypothesis that workload is negatively related to employee performance obtained a path coefficient value of -0.250, and the hypothesis is supported.

The higher the work stress felt by employees, the more burnout felt by employees. Work stress will arise if there is a gap between an individual’s abilities and the demands of his work. Thus the employee is unable to manage their level of stress which will have an impact on increasing the level of burnout. The analysis result shows that the effect of work stress on burnout is significant, and the obtained score was 0.631. It implies that the positive relationship between work stress and burnout was confirmed. Increased work stress in terms of referring patients to other polyclinic or to the support unit others, it causes the health worker’s performance to decrease. The lower the work stress, the better the health worker’s performance is increasing. It means work stress
has a significant effect on employee performance, this can be proven by the test results hypothesis of -0.241. Based on this score, the hypothesis was proved.

The result of the hypothesis testing of an indirect effect of workload on employee performance through burnout obtained a value of 0.257, which was slightly higher than the result of hypothesis testing about the workload on employee performance with the score was 0.250. This result implies that the workload both in quantity and quality too much/little results in a low level of performance, which is followed by increasing burnout. Therefore, a high level of burnout mediates this relationship between workload and health workers' performance.

Path coefficient score of an indirect effect of work stress on employee performance by mediating burnout obtained a value of 0.266. It was greater than 0.241 for the direct effect of work stress on employee performance. The health workers who are able to manage their stress level well, the pattern of life goals in a balanced way and does not interfere work routines, but it only occurred in the context of low burnout.

5. Conclusion

Workload, work stress, burnout, and employee performance obtained a mean score of 4.02; 2.71; 3.64; and 4.06, respectively. Overall, the health workers are successful in dealing with work stresses themselves even though they have a heavy workload between their main tasks and workload additional work, especially during the Covid-19 pandemic.

The workload has a positive and significant effect on burnout and has a negative and significant effect on employee performance. This can be seen from the answers of health workers who felt that during the pandemic, they worked exceeding their capacity. The volume of tasks is large with the limited number of human resources cause the workload of health workers to be higher both in terms of physical and non-physical workload, and this is a trigger for increased burnout. In carrying out the main tasks every day with a high workload, health workers feel the disturbance psychological, mental health and exhaustion in work (night shift).

Work stress has a positive and significant effect on burnout. Work stress has a negative and significant effect on employee performance. Health workers' ability in managing work stress well has an impact on reducing burnout. Low work stress at the Puskesmas in Tikung district because the health workers do not experience difficulty in carrying out their duties, and are able to establish a good relationship with medical personnel others.
Workload and work stress have a negative and significant effect on health workers' performance through burnout at Puskesmas in Tikung district. The mediating nature of burnout refers to an indirect effect that is partial mediation because the direct effect between workload and work stress on performance is also concluded to have a significant effect.

References


