The Effect of Work Stress on Work Engagement with Burnout as a Mediating Variable for Health Workers During the COVID-19 Pandemic

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Abstract. This study aimed to examine the effect of work stress on work engagement with burnout as a mediating variable. The phenomenon of work stress on medical personnel is a major concern during the COVID-19 pandemic. Work fatigue is very likely due to the high workload and work risk. The study was conducted on health workers in Yogyakarta using a purposive sampling technique so that a sample of 130 people was obtained, and the study was conducted during a pandemic. By using macro regression, the research results show that work stress does not affect work engagement (p = 0.415), work stress hurts burnout (p = 0.000), and burnout does not affect work engagement (p = 0.468). This study was also used to examine the role of burnout as a mediating variable. The results showed that burnout was not able to mediate the effect of work stress on work engagement.

Keywords: work stress, burnout, work engagement, covid pandemic

Introduction

The spread of the coronavirus in 2019 throughout the world has led to a pandemic known as COVID-19 (Coronavirus Disease 19). This outbreak was first
detected in Wuhan City, Hubei Province, China on December 1, 2019, and was declared a pandemic by WHO on March 11, 2020. Until November 14, 2020, more than 53,281,350 people were infected with this virus, the virus has spread to 219 countries in the world and resulted in the death of 1,301,021 people, as well as more than 34,394,214 people who experienced healing (Wikipedia).

This pandemic has changed the socio-economic order globally, postponed or canceled various events, and created panic due to fears of a shortage of goods. The company decided to implement Work From Home (WFH) to reduce the spread of this virus. The implementation of the WFH work system results in reduced communication with colleagues, and decreased supervisor support and trust (Trougakos et al., 2020). The WFH system in Indonesia has the effect of increasing flexibility, reducing transportation costs, minimizing stress due to congestion, and having more free time but can reduce motivation and increase telecommunications costs (Purwanto et al., 2020).

This pandemic has had a huge impact on health workers at work. They become workers with a very high-risk level for the possibility of being exposed to the covid virus. Several studies have shown the effect of this virus on health workers, especially nurses and doctors. Various implications for health workers are shown in Table 1.

<table>
<thead>
<tr>
<th>Author</th>
<th>Research Location</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xie et al., 2020</td>
<td>China</td>
<td>Lack of essential health resources&lt;br&gt;The challenge of recognizing the virus at the beginning of the period&lt;br&gt;Crisis Management</td>
</tr>
<tr>
<td>Chen et al., 2020</td>
<td>China</td>
<td>Nurse gets restless&lt;br&gt;Experiencing Nosocomial Infections</td>
</tr>
<tr>
<td>Legido-Quigley et</td>
<td>Spain</td>
<td>Lack of Doctor and Nurse Staff&lt;br&gt;Lack of masks&lt;br&gt;Insufficient Emergency Room Capacity&lt;br&gt;Restriction of movement of people</td>
</tr>
<tr>
<td>al., 2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Li et al., 2020</td>
<td>China</td>
<td>Traumatic Psychological Change</td>
</tr>
<tr>
<td>Millar, 2020</td>
<td>Australia</td>
<td>Feeling isolated&lt;br&gt;Psychological Stress&lt;br&gt;Possible infection</td>
</tr>
</tbody>
</table>
The current pandemic has changed the demands of work for nurses and doctors. They face a high risk that is very dangerous for their lives (Al Thobaity & Alshammari, 2020). Prolonged work demands experienced by employees in the company can cause work stress in addition to social, and physical aspects, workload, and a difficult work environment. The result of excessive and prolonged work demands causes problems, namely work stress. Employees who have excessive work stress will have a very bad impact on employee conditions and employee abilities within the scope of the company. Long term work stress will cause employees to feel very tired both physically and mentally and cause employees to quickly feel bored with work, this situation is called burnout. (Crawford et al., 2010).

Burnout is physical and mental fatigue and feelings of boredom towards work as a result of prolonged work stress. Fatigue in question is feeling tired due to heavy work which then causes work saturation and makes employees feel lost interest and involvement in their work. When workers suffer from burnout, a person will feel

Zeng and Zhen, China 2020
Lack of personal protective equipment
Feelings of fear
Physical exhaustion

Newby et al., 2020 America
USA –
Equipment limitations
Lack of personal protective equipment
Staff ratio issue
Relocation of tools between spaces

Gharebaghi and Iran Heidary, 2020
Limited ICU space
Number of nurse deaths
The increasing number of patients
Lack of masks

Source: (Al Thobaity & Alshammari, 2020)

This condition also occurs in Yogyakarta, where there are many residents infected with Covid 19, until December 2020 there were more than 10,000 people infected with Covid. The results of the distribution are shown in Table 2.

<table>
<thead>
<tr>
<th>No.</th>
<th>Evidence</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Covid confirmed patient</td>
<td>10,144</td>
</tr>
<tr>
<td>2</td>
<td>Patient recovers</td>
<td>6,747</td>
</tr>
<tr>
<td>3</td>
<td>Patient died</td>
<td>206</td>
</tr>
<tr>
<td>4</td>
<td>Suspect under monitoring</td>
<td>215</td>
</tr>
</tbody>
</table>

Data as of December 23, 2020, (covid19.go.id, 2020):

Wahana: Jurnal Ekonomi, Manajemen dan Akuntansi; Agustus 2023 [196]
emotionally exhausted, have little energy to engage in work, they face depersonalization which is characterized by a cynical attitude towards something related to work, they will also feel like a failure at work. (Montgomery et al, 2015). Significant work demands will cause burnout and result in reduced work engagement. The involvement of an employee in his work shows that the employee has worked optimally and does not feel forced when carrying out the demands of his job, employees tend to try to give more than the demands of their job. In this case, it shows that employees have work engagement. Work engagement is a condition in which employees or individuals in a company mark themselves with their work. Work engagement consists of three indicators: vigor, dedication, and absorption (Schaufeli et al, 2009).

Based on the background of the problem that has been described previously, the formulation of the problem in the study are:
1. Does work stress have a negative effect on work engagement?
2. Does work stress have a positive effect on burnout?
3. Does burnout have a negative effect on work engagement?
4. Does burnout mediate the effect of job stress on work engagement?

This study will analyze the effect of work stress on work engagement, the effect of work stress on burnout, the effect of burnout on work engagement, and the mediating role of burnout on the effect of work stress on work engagement in health workers in Yogyakarta.

**Literature Review and Hypothesis Development**

**Work Engagement**
Work engagement is defined by Schaufeli et al (2002) as a positive and satisfying state of mind related to work and is characterized by vigor, dedication, and absorption. Engagement is employees’ positive attitude towards the organization and its values. Organizations must develop and maintain engagement, which is a two-way relationship between the organization and employees. Work Engagement will make workers very involved in work, a person will feel an important contribution to the organization, enthusiasm, inspiration, pride, and challenge. Employees who have high work engagement will be characterized by high levels of energy and mental resilience at work, willingness to invest effort in their work, and persistence in the face of adversity. Concentrate fully concentrated on Work, where time passes quickly, and one has difficulty separating oneself from work.

**Work Stress**
Stress is an unpleasant psychological process that occurs in response to environmental pressures (Robbins & Judge, 2017). Stress is the result of the interaction between stressful conditions (stressors/stimulations in the environment) and a person’s tendency
to respond in a certain way. Stress is a response experienced by someone who feels anxious, tense, and worried. Stress arises as a result of stimulating factors or what are called stressors (Gibson et al. 2011). Meanwhile, according to Umam (2018), Stress is a personal condition (internal), which can be triggered by bodily demands (physical) or social and environmental conditions that have the opportunity to damage and be out of control. In addition, if a worker is experiencing work stress for a long time, it can trigger/be a driving force for workers to experience burnout (saturation/fatigue).

Burnout
Burnout is a psychological process due to work stress that results in emotional exhaustion, depersonalization, and feelings of decreased achievement (Gibson et al., 2011). Burnout is a state of psychological stress by employees after working for a certain period. Someone who is emotionally exhausted and has low work motivation (Dondokambey et al., 2018). Burnout is a condition where a worker is experiencing one form of work stress for a long period and a situation where the workforce cannot achieve the goals they expect, workers who experience this condition can be seen from the condition of workers who experience fatigue. physical and psychological, decreased productivity, and so on (Kartono, 2017). Burnout is a condition in which a worker feels fatigued (physically and psychologically) due to a job that has been done and can result in a worker not being enthusiastic about work (Pradana, 2017).

Hypothesis Development
The Effect of work stress on work engagement
Stress is one of the triggers for one's health and this can cause a person to experience a decrease in performance in the future (Dinh, 2020). Stress will have a negative effect on work engagement. Health workers are workers who are directly exposed to some work stress caused by the Covid 19 infection, this can affect mental and physical health which will also cause a decrease in work engagement. Work stress experienced by health workers is time pressure, low appreciation, lack of patience in interacting with patients, and inability to control emotions (Zhang et al., 2021). The high-stress level will reduce workers' emotions and cognitive abilities, which will lead to poor work engagement. H1: Work stress has a negative effect on work engagement

The effect of work stress on Burnout
Job stress is often associated with burnout, job satisfaction, and mental health. Stressors that contribute to stressful experiences include poor supervision, conflict with coworkers or patients, high job demands, and working overtime which can be linked to the burnout dimension (Khamisa et al., 2017). Previous studies linking the level of stress in health workers show that work stress in health workers is related to burnout (Kim, 2020). The burnout that occurs because of the many factors that trigger stress makes the individual
emotionally no longer able to tolerate these stressful conditions, causing emotional exhaustion (Lan et al., 2020).

H2: Work stress has a positive effect on burnout

The Effect of Burnout on work engagement

Burnout is a syndrome of emotional exhaustion, depersonalization, and reduced personal achievement, which occurs in response to chronic stress from work and interpersonal relationships (Poelmann et al., 2021). Emotional exhaustion refers to the exhaustion of feelings caused by other people. Depersonalization refers to the development of a dehumanizing and cynical attitude towards others whereas reduction of personal achievement refers to a decrease in one's feelings of competence and achievement of success in work. Research for more than two decades shows that burnout not only produces negative outcomes for individuals but also for organizations including absenteeism rates, turnover rates, and low productivity (Maslach et al., 2001). Burnout hurts work engagement (Bakker et al., 2014).

H3: Burnout has a negative effect on work engagement

The role of burnout as a mediator on the effect of work stress and work engagement.

Job stress has become a common problem faced by employees in many organizations. Stress has increased significantly and this shows that there is a tendency for employee dissatisfaction with the organization, the direct effect of stress on work engagement can be mediated by burnout where prolonged stress will cause chronic fatigue for employees, causing a decrease in employee work engagement (Luan et al., 2017).

H4: Burnout mediates the effect of job stress on work engagement

Based on the description above, the research framework is as follows:

Research Method

This research is using a quantitative approach. This type of research is case study research to test theories and provide empirical evidence.
Population and Research Sample
The population in this study was workers in hospitals in Yogyakarta. The sampling technique used is purposive sampling. Respondents or samples in this study were health workers (doctors and nurses) who directly served in services to patients in hospitals in the Yogyakarta area during the COVID-19 pandemic.

Measurement Variable
Work engagement is a state of the positive mindset of employees that can be seen with enthusiasm (vigor), dedication, and attachment Schaufeli et al., (2006). Stress is an unpleasant psychological process that occurs in response to environmental pressures. Robbins & Judge (2017), explained that three factors influence work stress on a person: Physiological Indications, Psychological Indications, Behavioral Indications.

Burnout is a psychological process due to work stress that results in emotional exhaustion, depersonalization, and feelings of decreased achievement. There are three burnout indicators Gibson et al. (2011), namely Emotional exhaustion, Depersonalization, Low personal accomplishment

Data collection technique
The data collection technique used by the researcher is a questionnaire. Questionnaires are instruments for data collection, where participants or respondents fill out questions or statements given by researchers (Ghozali, 2018). Data collection uses google form media where links are distributed to respondents. The research samples in this study are:

Table 3. Research Sample

<table>
<thead>
<tr>
<th>No</th>
<th>Hospital</th>
<th>No</th>
<th>Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Puskesman Piyungan</td>
<td>11</td>
<td>RSUP Sardjito</td>
</tr>
<tr>
<td>2</td>
<td>Puskesmas Banguntapan I</td>
<td>12</td>
<td>RSU PKU Muhammadiyah</td>
</tr>
<tr>
<td>3</td>
<td>Puskesmas Kasihan 2</td>
<td>13</td>
<td>RSJ Grasia Sleman</td>
</tr>
<tr>
<td>4</td>
<td>Klinik Gading Yogyakarta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Klinik Pratama Naura Husada Pundong Bantul</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>RSU Kharisma Paramedika</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>RSUD Saptosari Gunung Kidul</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>RSU Rachma Husada Bantul</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>RSUD Panembahan Senopati Bantul</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>RSU Sakina Idaman</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data analysis technique
Hypothesis testing in this study uses a macro regression process to test the effect between variables and to test the intervening variables.
Results and Discussion

Characteristics of Respondents
Respondents in this study amounted to 130 people with the following characteristics:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Quantity</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>28</td>
<td>21.54</td>
</tr>
<tr>
<td>Woman</td>
<td>102</td>
<td>78.46</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>9</td>
<td>6.9</td>
</tr>
<tr>
<td>Diploma 3</td>
<td>80</td>
<td>61.54</td>
</tr>
<tr>
<td>Diploma 4</td>
<td>3</td>
<td>2.31</td>
</tr>
<tr>
<td>Bachelor</td>
<td>30</td>
<td>23.01</td>
</tr>
<tr>
<td>Master</td>
<td>8</td>
<td>6.24</td>
</tr>
<tr>
<td><strong>Length of Work</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5 Years</td>
<td>75</td>
<td>57.69</td>
</tr>
<tr>
<td>6-10 Years</td>
<td>18</td>
<td>13.85</td>
</tr>
<tr>
<td>11-15 Years</td>
<td>15</td>
<td>11.54</td>
</tr>
<tr>
<td>&gt;15 Years</td>
<td>22</td>
<td>16.92</td>
</tr>
</tbody>
</table>

From Table 4, based on gender, there were 28 (21.54%) male respondents and 102 (78.46%) female respondents. Based on the level of education, the respondents in this study were dominated by respondents with a D3 education level of 80 people or 61.54%. Meanwhile, from the length of time worked, 56.69% had worked between 1-5 years.

Hypothesis testing
This study was tested using a macro process, to examine the effect of stress on work engagement, the effect of stress on burnout, and the effect of burnout on work engagement. The test results are as follows:

<table>
<thead>
<tr>
<th>Work Engagement</th>
<th>Burnout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstandardized Coefficients</td>
<td></td>
</tr>
<tr>
<td>Stress</td>
<td>0.066</td>
</tr>
<tr>
<td>Burnout</td>
<td>0.066</td>
</tr>
<tr>
<td>Standard Error</td>
<td>2.883</td>
</tr>
<tr>
<td>Sig</td>
<td>0.415</td>
</tr>
<tr>
<td>Sig</td>
<td>0.043</td>
</tr>
</tbody>
</table>

Table 7. shows that work stress has a negative effect on work engagement but the effect is not significant (β = -0.066; p = 0.415) so the first hypothesis which states that work stress has a negative effect on work engagement is not accepted. The results of the analysis of work stress on burnout indicate that work stress has a significant positive effect on burnout (β = 0.513; p = 0.000), so the second hypothesis is accepted. The third
hypothesis which states that burnout has a negative effect on work engagement is not accepted because the influence of both is not significant ($\beta=-0.083; p=0.468$).

Table 8. shows the results of the prediction of the mediating role of burnout on the relationship between job stress and work engagement.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Boot SE</th>
<th>Boot LL CI</th>
<th>Boot UL CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Stress $\rightarrow$ Burnout $\rightarrow$ Work Engagement</td>
<td>-0.0009</td>
<td>0.0067</td>
<td>-0.0163</td>
</tr>
</tbody>
</table>

This study shows that burnout is not able to mediate the relationship between work stress and work engagement, this can be seen from the lower level and upper level of the confidence interval which contains a value of 0.

**Discussion**

The level of work stress ($M = 2.17$) and burnout ($M = 2.33$) which are not high have a major influence on the results of the study although work stress has a significant positive effect on burnout (Khamisa et al., 2015). The level of work engagement ($M = 3.73$) is quite high, which means that there is no effect of positive thinking on work caused by the level of work stress and burnout. This is because the research sample is not medical personnel who directly treat patients infected with COVID-19 even though they work at medical service centers. Future research needs to focus on medical personnel who directly handle their service centers affected by COVID-19 to obtain more accurate results.

**Conclusion**

Based on the results of the study, work stress has a negative effect on work engagement in Health Workers During the COVID-19 Pandemic but the effect is not significant ($\beta=-0.066; p=0.415$) so the first hypothesis which states that work stress has a negative effect on work engagement is not accepted. Meanwhile, the job stress variable has a significant positive effect on burnout ($\beta= 0.513; p=0.000$) so the second hypothesis which states that work stress has a positive effect on burnout is accepted. Burnout has no significant negative effect on work engagement ($\beta=-0.083; p=0.468$) so the third hypothesis which states that burnout has a negative effect on work engagement is not accepted. This study shows that burnout is not able to mediate the relationship between work stress and work engagement, this can be seen from the lower level and upper level of the confidence interval which contains a value of 0.

In the next study, it is necessary to select a research sample, namely health workers who directly handle patients and prepare facilities for those affected by covid 19. The sampling period is not yet in the first or second wave of the covid pandemic period which
is very heavy for Indonesia so the influence of stress and burnout will affect the positive perception of work.

References


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of Organizational Behavior. https://doi.org/10.1002/job.595