
THE EFFECT OF WORKLOAD AND CREW ROTATION ON CREW PERFORMANCE BY MEDIATING WORK STRESS DURING THE COVID-19 PANDEMIC AT PT. TOS INDONESIA: A CONCEPTUAL MODEL

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ABSTRACT

The Covid-19 pandemic has caused issues for Indonesian maritime services, affecting the continuity of shipping operations and sailor safety. The ship's crew faces an extra workload due to crew change delays imposed by travel restrictions and lockdowns. As a result, the ship's crew performance has been deteriorating for the last three years. The impact of workload and crew rotation on crew performance during the Covid-19 pandemic in PT. TOS Indonesia is investigated in this paper. Due to travel restrictions, the ship's crew faced obstacles, resulting in an increasing workload and decreased performance during the last three years. This research provides a conceptual model with hypotheses for investigating the relationships between workload, crew rotation, job stress, and crew performance. SPSS and path analysis were used to acquire quantitative data from 50 crew members. This paper explains how workload and crew rotation affect crew performance, mediated by job stress.

KeyWords

Conceptual Model, Crew Performance, Workload, Crew Rotation, Work Stress, Maritime Services.

INTRODUCTION

Because of the impact of the Covid 19 pandemic, maritime services in Indonesia face complex challenges in maintaining the continuity of shipping activities and the safety of sailors. The challenge comes in the form of stringent health protocols to prevent the virus from spreading in ships and ports. 2020 (Ministry of Maritime Affairs). At the time, the ship's crew faced several challenges that jeopardized their smooth operation and safety. The performance of the ship's crew is critical in maintaining smooth operations and safety at sea during this difficult situation. The ship's crew has demonstrated outstanding performance and high adaptive skills in dealing with the new challenges that have arisen in dealing with this pandemic (CDC, 2021).

Some aspects are significantly impacted in this case, such as increased workload due to changes in operational and working environmental conditions on board. Several factors can contribute to an increase in workload. First, many countries' travel restrictions and lockdowns have caused delays in changing crews. This resulted in the ship's crew working longer hours because they had to stay on board for longer than they should have.

Based on the data obtained, it can be concluded that the performance of the ship's crew has been declining year after year for the last three years, namely 2020, 2021, and 2022. The average performance in 2020 was 87.25, fell to 85.89 in 2021, and reached a low of 84.00 in 2022. This decline reflects a shift in the quality and productivity of employee performance during this period (Oltedal,

2011). This demonstrates that the higher the level of work stress that employees experience, the lower their performance (Sumarsid and Rusipan, 2022).

LITERATURE REVIEW

A. Workload

Workload, according to Moekijat (2009), is the volume of work or records of work productivity that reflect the amount of work produced by a group of workers in a specific unit. Workload imposition varies and has varying degrees of difficulty. (2011) (Hariyati). Workload significantly impacts worker performance (Basahel et al., 2010). The workload is determined by company work standards that are based on the type of work performed.

Mudayana (2012) defines workload as having three levels: workload in accordance with work standards, workload below standard, and workload above standard. Workers can work optimally when their workload is following work standards. However, if the workload falls short of expectations, the company will suffer losses, and the work will become inefficient. Munandar (2001) describes two aspects of workload that require attention. First, consider workload in terms of physical demands. Then there's workload as task demands.

According to Soleman (2011), there are two types of influencing factors in the context of workload: external factors and internal factors. External factors are those that originate outside of the employee's body. On the other hand, internal factors arise from within a person's body or person in response to external workloads that can potentially cause stress. Somatic and psychological factors are examples of internal factors. According to Koesomowidjojo (2017), several workload indicators must be considered. First, working conditions are an important indicator, as are employees' understanding of their duties and responsibilities. The use of working time is also an important indicator in determining employee workload. The next indicator is the establishment of targets that must be met by each employee.

B. Crew rotation

According to Wahyudi (2002), changing a ship's crew is a horizontal mutation carried out without any salary or rank/class changes to increase the crew's knowledge and prevent burnout. When the crew begins to feel overly routine in their work, one option is to replace the ship's crew. According to Robbins and Judge (2011), ship crew turnover is the periodic crew shift from one task to another with the exact skill requirements at the same ship level.

Kaymaz as cited on Megantara (2019) explains that the benefits of changing the ship's crew are felt by the ship's crew and provide indirect benefits to shipping companies. Crews that have experienced rotation will have a broader range of management skills and understanding and the ability to adapt to changes and fill vacancies in crew assignments. A crew rotation can reduce boredom, prepare the crew for a better management system, increase productivity, and improve the crew's knowledge and skills.

Hasibuan (2013) suggests that various factors cause job rotation in an organization:

- 1) Rotation at Own Request, i.e., rotation performed on the employee's own initiative with the approval of the organization's head. There are several reasons to request a rotation, including health, family, and cooperation.
- 2) Productive task transfer, i.e., rotation carried out by company leaders to increase production by placing employees based on their abilities. Production transfers, replacement transfers, and versatility transfers are some other reasons for productive task shifting.

According to Afandi (2016), there are three factors used in measuring variables in the implementation of crew turnover:

- 1) Capability of the ship's crew.
- 2) Knowledge of the ship's crew.
- 3) Saturation of the ship's crew.

C. Work Stress

According to Robbin (2015), work stress in a company organization is an important symptom to observe since the demand for efficiency at work appears. Employee work stress must be managed by company leaders so that negative effects on the company can be avoided. Work stress can agitate a person or employee, cause chronic anxiety, and increase emotional tension, thought processes, and individual physical conditions. Hasibuan (2014) defines an angry, aggressive, unable to relax, or uncooperative attitude.

Work stress symptoms include, among other things, unstable emotional changes, a tendency to be alone, difficulty sleeping, excessive cigarette consumption, difficulties relaxing, anxiety, tension, restlessness, increased blood pressure, and digestive disorders. 2008 (Handoko)

It has been indicated by Handoko (2011) that there are multiple indicators of stress in the workplace:

- 1) The disparity between the expected roles, the required time, and the resources available to meet these requirements.
- 2) The role conflict indicator refers to conceptual differences between employees and superiors regarding the tasks that must be completed.
- 3) The role ambiguity indicates an employee's uncertainty about the tasks that must be completed.

There are two main causes or sources of stress or work stress: work environment and personal factors. The physical conditions

of the workplace, office management, and social relations are all work environment factors. On the other hand, personal factors include individual personality types, personal events or experiences, and family socioeconomic conditions that affect individuals.

D. Work Performance

According to Kasmir (2016), work performance results from individuals' efforts in completing the tasks and responsibilities assigned to them within a given time frame. Both profit-oriented and non-profit organizational performance can be measured by the results produced over a specific period. Economic contribution, customer satisfaction, and achievement of corporate strategic goals are other performance-related factors (Fahmi, 2016). Individual work achievements or results that can be measured based on the quality and quantity achieved in carrying out assigned duties and responsibilities are referred to as performance.

It should be remembered that performance plays an essential role in determining the effectiveness and efficiency of work, both at the individual and organizational levels. As a result, performance management is a critical component of human resource management. As defined by Wibowo (2014), there are seven interconnected performance factors:

- 1) Goal.
- 2) Standard.
- 3) Feedback.
- 4) The tool or means.
- 5) Competence.
- 6) Motive.
- 7) Opportunity.

According to Afandi (2018), several indicators of employee work performance exist. First, indicators of the quantity of work output encompass a wide range of units of measurement related to the amount of work output that can be expressed numerically or in other numerical equivalents. Second, indicators of work result quality include various measurement units related to the quality or quality of work results. Third, task efficiency reflects the wise and economical use of resources in task execution. Fourth, work discipline demonstrates adherence to applicable laws and regulations. Fifth, the initiative demonstrates the ability to make sound decisions and take appropriate action. Seventh, leadership is the process by which leaders influence or set examples for subordinates to achieve organizational goals.

CONCEPTUAL MODEL

Considering the results of previous research and the literature, the workload is a relevant variable because the performance of the ship's crew is very dependent on the expertise, skills, and knowledge possessed by each member of the ship's crew. Furthermore, crew turnover and work stress are also considered important factors that can affect the performance of the ship's crew. As a result, the content of this study may be used to develop a conceptual model, shown in Figure 1 below.

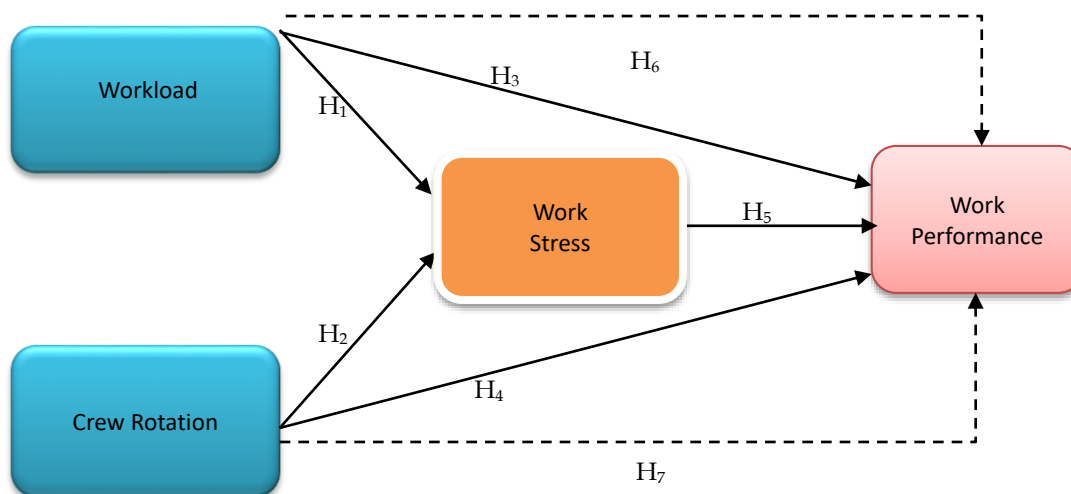


Figure 1. The Conceptual Model

Description:
 ———▶ : Direct Effect
 - - - - -▶ : Indirect Effect (Mediated)

HYPOTHESES

The researchers developed this research by analyzing the phenomena between the variables studied to produce hypotheses. The conceptual framework in Figure 1 in this study summarizes the flow of thought related to workload variables, crew turnover, work stress, and crew performance. Based on the framework of research thinking, theory, and research studies earlier, the hypothesis can be formulated as follows:

- H1: Workload directly has a positive and significant effect on Work Stress.
- H2: Crew Rotation has a direct positive and significant effect on Work Stress.
- H3: Work Stress has a direct and significant positive effect on Work Performance.
- H4: Workload has a direct positive and significant effect on Work Performance.
- H5: Crew Rotation has a direct positive and significant effect on Work Performance.
- H6: Work Stress acts as a variable that mediates the relationship between Workload and Work Performance.
- H7: Work Stress acts as a variable that mediates the relationship between Crew Rotation and Work Performance.

METHODOLOGY

This research collects data using quantitative methods with specified standards and measures. In the course of this research, the crew of the PT. TOS Indonesia served as the subject population. The sampling strategy used in this research was saturation sampling (census). Hence there were 50 samples in total.

Data acquired by distributing questionnaires with a Likert scale score of 1-5 were then analyzed statistically to evaluate the study hypothesis. Data analysis employs an inferential technique, which allows for generalizing the population as a whole based on the samples gathered. The acquired data will be validated and reliable using SPSS software before being examined using path analysis, as with other parametric statistical approaches.

CONCLUSION

This paper was created to develop a conceptual model to examine the effects of workload and crew rotation on crew performance by mediating work stress during the covid-19 pandemic at PT. TOS Indonesia. This conceptual paper consists of a research background, literature review, conceptual model, hypothesis, and research methods of the effects of workload and crew rotation on crew performance by mediating work stress during the covid-19 pandemic at PT. TOS Indonesia. The purpose of this paper is to provide an overview of the conceptual model regarding the relationship between workload and crew rotation on crew performance by using work stress as the mediating variable.

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