
THE INFLUENCE OF LEADERSHIP STYLE AND WORKLOAD ON SHIP CREW PERFORMANCE MEDIATED BY WORK FATIGUE AND SHIFT ROTATION SYSTEM: A CONCEPTUAL MODEL

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ABSTRACT

This paper examines the effect of leadership style and workload on ship crew performance, considering the mediating function of work tiredness and the shift rotation system. The research is based on empirical research as well as observational data. The literature review investigates leadership styles, workload, work fatigue, and the shift rotation system. The conceptual model depicts the interactions between these factors. The model is used to generate hypotheses. The process entails collecting and analyzing quantitative data using questionnaires and SPSS software. This study aims to help with human resource management in the shipping industry by identifying the elements that impact crew performance and applying successful techniques.

KeyWords

Conceptual Model, Ship Crew, Leadership Style, Workload, Work Fatigue, Shift Rotation System, Crew Performance, Work Performance, Human Research Management.

INTRODUCTION

As the significant agent in ship operations in the shipping sector, the ship's crew plays a critical role. The effectiveness and triumph of maritime journeys are dependent on the performance of the personnel on board (Ricardianto et al., 2020). Understanding the impact of leadership style on the performance of a ship's crew extends beyond operational success to include safety considerations. Furthermore, it is critical to recognize that a heavy workload can significantly impact the efficacy of ship crews functioning in a diverse marine situation. According to Olstedal (2011), an excessive workload can have a negative impact on crew performance, resulting in lower operational efficiency and increased safety concerns.

Excessive work demands might result in work tiredness, impairing the performance of the crew members aboard the ship. Work weariness among ship sailors can substantially impact operating efficiency and safety. As a result, it is critical to consider the elements that reduce work tiredness and improve crew performance. The shift rotation system is one crucial feature that must be considered. A shift rotation system is a scheduling approach that involves rotating the distribution of working hours and rest intervals over a set period (Prasmawati, 2002). Shipping businesses have the ability to improve ship crew performance and operational safety by employing an effective shift rotation system.

According to data analysis, the PT.X case study demonstrates a significant reduction in the mean performance metric of the ship's crew from 2021 to 2023. The observed pattern shows a decrease in leadership style with time, coupled with increased workload. Furthermore, work tiredness has increased, coinciding with a progressive reduction in the implementation of the shift rotation system. The data presented shows significant swings in the mean values of these variables over the years, underscoring the need to account for these variations when studying trends and patterns that affect performance. The observed decline implies the presence of underlying issues that must be addressed in order to improve the ship's crew's performance and match the intended benchmarks.

The purpose of this study is to investigate the impact of leadership style and workload on performance, with a particular emphasis on the mediating role of work tiredness and the shift rotation system. The study is based on empirical research and observational data.

LITERATURE REVIEW

A. Leadership Style

According to Hasibuan (2013), leadership style reflects how an individual influences subordinates to work productively toward organizational goals. Leaders must adapt their leadership style to the situation at hand. The fit between the leader's leadership style and the situation can strengthen leadership and aid in achieving organizational goals. Rivai (2012) distinguished five leadership styles:

- 1) The autocratic leader regards the organization as private property, views subordinates as tools, and does not accept criticism or suggestions from them.
- 2) The militaristic type, in which the leader uses orders as a motivational system, relies on hierarchy and positions, expects a high and rigid workload from subordinates, and is resistant to criticism.
- 3) The paternalistic type, in which the leader regards subordinates as immature individuals who are overly protective, rarely gives associates opportunities to make decisions, develops creativity and frequently acts arrogantly.
- 4) The charismatic type, in which the leader has a strong appeal and can lead in an inspiring manner, resulting in many followers.
- 5) Democratic type, which is considered most relevant in modern organizations, in which leaders strive to strike a balance between the organization's interests and goals and the interests and goals of individual subordinates, accept suggestions, opinions, and criticism from them, and continue to develop personal leadership capacity.

According to Setiawan and Muhith (2013), several factors have a relevant or positive impact on an organization's leadership process. Personality, past experiences, and expectations are among these factors. This includes values, background, and experiences that will influence the choice of leadership style; manager's expectations and behavior; subordinates' characteristics, expectations, and behavior that will affect leadership style; task requirements, where each subordinate's task will also influence the leadership style; organizational climate and policies that influence subordinates' expectations and behavior; and peer expectations and behavior.

Leadership indicators, according to Kartono (2010), include:

- 1) Advisor; A leader must be able to guide his subordinates to be willing to work and to lead them towards goals that are within the timeframe and planning that has been established.
- 2) Communicative; Leaders must be able to communicate with all stakeholders, both formal and informal. The success of a leader's duties is primarily determined by his ability to establish proper communication with all parties, both horizontally and vertically, superiors, and subordinates.
- 3) Democratic; Democratic leadership focuses on people and provides followers with effective guidance. Work is coordinated among all subordinates, emphasizing internal responsibility and accountability. Democratic leaders value each individual's potential and are open to advice and suggestions from associates.

1) Workload

Workload, according to Hariyati (2011), is the difference between an employee's capacity or ability and the work demands that must be met. The level of workload assignment varies and has varying degrees of difficulty. The workload is defined by some experts as follows:

- 1) Workload refers to a situation in which employees are assigned tasks that must be completed within a specific time frame (Munandar, 2001).
- 2) Workload is defined as the volume of work or work productivity records that reflect the amount of work produced by a group of employees in a specific unit (Moekijat, 2009).
- 3) Workload is the amount of work that a position or organizational unit must bear, which is calculated by multiplying the volume of work by the time norm (Permendagri, 2008).

According to Mudayana (2012), there are three levels of workload: workload in accordance with work standards, workload below standards, and workload above standards. Employees can work optimally when their workload is following work standards. However, if the workload is subpar, the company gains money, and the work could be more efficient. On the other hand, if the workload exceeds the standard, employees will work less efficiently, experience work stress, and their performance and productivity will suffer.

Munandar (2001) describes two aspects of workload that require attention. First, consider workload in terms of physical demands. Certain working conditions can impact employee performance and the achievement of optimal work performance. The physical aspect can also have an impact on employees' mental health. As a result, keeping employees' physical conditions in good health is critical, including adequate rest and a comfortable work environment.

Second, workload as task demands. Shift or night work is outside of regular working hours that require employees to complete tasks within a specified time limit. However, shift or night work frequently causes employee fatigue due to an excessive workload. Employee performance can be harmed by both excessive and insufficient workload.

Several workload indicators, according to Koesomowidjojo (2017), require attention, including the following:

- 1) Working Conditions; This indicator includes a good understanding of employees towards the work being done. Therefore, the

company should provide and socialize the SOP (standard operating procedure) to all members of the company.

- 2) Use of Working Time; Complying with SOPs for the use of working time can help reduce the workload of employees.
- 3) Targets that must be achieved; Determining the time to complete a certain volume of work for each employee that differs from one another is very important to ensure a reasonable workload.

2) Work Fatigue

There are numerous definitions of fatigue, and each person will interpret it in their own unique way. Work fatigue is a complex concept linked not only to physiological and psychological aspects of work but also to decreased physical performance, feelings of fatigue, decreased motivation, and decreased work productivity (Silastuti, 2007). In this context, fatigue not only hurts the body physically but also harms the individual's psychological aspects and work output. Work fatigue management is essential to human resource management because it is a key component in increasing employee productivity, welfare, and job satisfaction.

Work fatigue can be caused by various factors, which must be thoroughly understood. External factors include the tasks that must be completed, the organizational conditions that govern the workplace, such as working hours, breaks, shift work, and night work, and the working environment, which includes physical, chemical, biological, ergonomic, and psychological aspects. On the other hand, internal factors include somatic factors such as age, gender, body size, health condition, and nutritional status, as well as psychological factors such as motivation, job satisfaction, and desire (Russeng, 2011). Age, gender, body size, and health condition are somatic factors. According to Suma'mur (2009), there are several indicators of work fatigue, which are as follows:

- 1) Indicates that activity levels have decreased.
- 2) Indicates a decrease in one's motivation.
- 3) Describes the physical exhaustion that can occur due to everyday conditions.

3) Shift Rotation System

The Shift Rotation System, also known as work rotation, is one of the efforts in human resource development that aims to alleviate boredom, provide refreshments at work, and improve employee skills and experience. According to Mubarak (2017), job rotation is the process of changing the variety of tasks performed by someone by moving employees to a different position than before. Wahyudi (2002) defines job rotation or position rotation as a horizontal mutation that occurs without any changes in salary or rank/class, aiming to increase employee knowledge and prevent burnout. Based on some of these definitions, job rotation is a strategy used by companies or organizations to develop employee capacity and overcome burnout at work without changing the salary or rank/class of employees.

According to Afandi (2016), three variables are measured in implementing work rotations. The first is employee ability, which refers to a person's ability to perform various tasks at work. This ability can be seen in the skill, sincerity, and timeliness of completing tasks.

The second factor is employee knowledge, which is a type of ability acquired by employees through education and experience. This knowledge is essential for carrying out various duties and responsibilities in the workplace.

Furthermore, employee saturation is a third factor. Job burnout occurs when a person becomes exhausted from working intensively, dedicatedly, and committedly for an extended period. Saturation also occurs when people believe their needs and desires are not being met. Emotional anxiety, apathy, distraction, depression, boredom, decreased energy, and loss of enjoyment at work are all signs of job burnout.

Overall, a thorough understanding of the factors involved in job rotation implementation has significant implications for human resource management. When implementing job rotation, it is critical to consider employees' capabilities, knowledge, and the potential for job burnout. Management must also consider labor demand and appropriate rotation policies to meet organizational needs and maintain long-term productivity.

CONCEPTUAL MODEL

Considering the literature review and previous studies, a conceptual framework was developed in this study to summarize the flow of thought related to the variables of leadership style, workload, work fatigue, shift rotation system, and crew performance, as illustrated in Figure 1. This study will employ a conceptual model of several hypotheses to clarify the relationship between related variables. This research is expected to provide a clearer picture of the relationship between associated variables and yield significant findings in developing human resource management on ships by using this model.

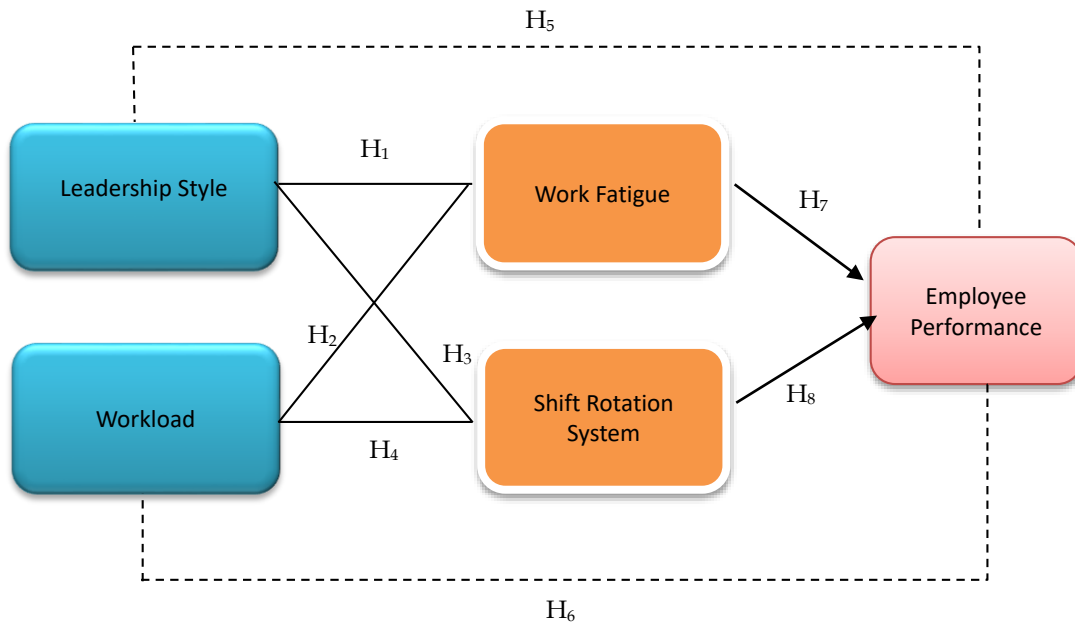


Figure 1. The Conceptual Model

Description:

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

HYPOTHESES

Based on the conceptual model in Figure 1, the hypothesis can be formulated as follows:

- H1: Leadership style of the ship's crew has a direct positive and significant effect on the work fatigue of the ship's crew.
- H2: Workload has a direct and significant positive effect on crew fatigue.
- H3: Leadership style of the ship's crews has a direct positive and significant effect on the shift rotation system of the ship's crew.
- H4: Workload has a direct positive and significant effect on the crew's shift rotation system.
- H5: the leadership style of the ship's crews has a direct positive and significant effect on the performance of the ship's crew.
- H6: Workload has a direct positive and significant effect on the crew's performance.
- H7: Work fatigue has a direct and significant positive effect on crew performance.
- H8: Shift rotation system has a direct positive and significant effect on the performance of the ship's crew.
- H9: Work fatigue acts as a variable that mediates the relationship between leadership style and crew performance.
- H10: Shift rotation system acts as a variable that mediates the relationship between leadership style and crew performance.
- H11: Work fatigue acts as a variable that mediates the relationship between workload and crew performance.
- H12: Shift rotation system acts as a variable that mediates the relationship between workload and crew performance.

METHODOLOGY

This study uses quantitative methods to collect data with predetermined standards and measurements. Data collection methods commonly used in quantitative research include questionnaires, interviews, and observation. The data collected was then analyzed using statistical techniques to test the research hypothesis. Data analysis uses an inferential approach that allows generalization to the population as a whole based on the samples taken. In this study, the population that was used as the subject was the crew of the X ship. The samples were selected using a proportional sampling technique based on the criteria and obtained a total sample of 78 samples.

Data collection will be done using a 5-Likert scale questionnaire. This research will be tested for validity, reliability, and data normality tests using SPSS software and using the path analysis test method, and the results will be analyzed using the same software.

CONCLUSION

This paper's primary goal is to advance knowledge of the connection between a leader's style, workload, work fatigue, crew performance, and the shift rotation system. This conceptual paper contains a research background, a literature review, a conceptual

model, hypotheses, and research methodology for ship X's crew performance. The purpose of this paper is to provide information about the effect of leadership style and workload on crew performance using work fatigue. with a shift rotation system as a mediator.

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