

Building a Culture of Safety among Future Maritime Leaders in Indonesia

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Abstract. *This research investigates the implementation and perception of Occupational Safety and Health (K3) among cadets in the Port and Shipping Management program at the Jakarta Maritime Institute. Through qualitative interviews and surveys with 50 cadets, key K3 aspects such as hazard identification, safe work practices, and physical health were examined. The results reveal a strong emphasis on preventing accidents and injuries, while also highlighting areas for improvement in mental health, healthy lifestyles, and productivity-related aspects. Additionally, the research assesses the alignment of K3 practices with international standards and regulations, such as the Standards of Training, Certification, and Watchkeeping for Seafarers (STCW) established by the International Maritime Organization (IMO). While certain K3 aspects and regulations are compliant, there are opportunities for further improvement to ensure full alignment. The implications of the research extend to policy and practice in the maritime industry, emphasising the importance of continuous evaluation and refinement of K3 practices to foster a stronger safety culture among future maritime leaders and enhance the overall safety and health of workers in the maritime sector.*

Keywords: *Occupational Safety and Health (K3), Maritime Industry, Safety Culture, STCW-IMO Standards, Qualitative Research*

INTRODUCTION

Occupational Safety and Health (K3 - Keselamatan dan Kesehatan Kerja) is a critical aspect of the maritime industry, ensuring the well-being of seafarers and the efficiency of maritime operations (Nst & Susilawati, 2023; Sumantri & Susilawati, 2023). In Indonesia, where the maritime sector plays a significant role in the economy, the implementation of K3 principles is vital. In this research, the focus is on K3 studies, particularly within the context of the Port and Shipping Management program at the Jakarta Maritime Institute. This program is crucial as it prepares cadets to become future maritime leaders, officers, and managers who will oversee operations in the maritime industry, seafarers program, transportation management, and vocational school for fishery and marine (Callís Oliver, 2018; Kim & Park, 2019).

The key aspects of K3 studies encompass preventing accidents and injuries, promoting health and well-being, and enhancing productivity. These aspects are crucial for ensuring a safe work environment and reducing risks in maritime operations. To effectively implement K3 principles, it is essential to comply with various laws and standards in Indonesia, such as UU No. 1 Tahun 1970 tentang Keselamatan Kerja, Permenaker No. 5 Tahun 1996 tentang Sistem Manajemen K3, and PP No. 50 Tahun 2012 tentang Penerapan Sistem Manajemen Keselamatan Dan Kesehatan Kerja. These regulations provide guidelines for implementing K3

management systems and ensuring the safety and health of workers in the maritime sector (Keke et al., 2023; Wahyuni et al., 2023).

Despite the importance of K3 studies in the maritime industry, there is a gap in research regarding the implementation and perception of K3 among future maritime leaders in Indonesia. This research aims to address this gap by focusing on the Port and Shipping Management program at the Jakarta Maritime Institute. By conducting qualitative research with 50 cadets, this study will analyse their understanding and perception of K3 practices. The results will not only provide insights into the current state of K3 education but also propose strategies to foster a stronger safety culture among future maritime leaders. The research objectives are twofold: first, to assess the current implementation of K3 principles within the Port and Shipping Management program at the Jakarta Maritime Institute, and second, to identify gaps in K3 education and propose strategies to enhance the safety culture among future maritime leaders (Ibrahim & Aris, 2022; Lahibu et al., 2022). By achieving these objectives, this research aims to contribute to the improvement of K3 education and practices in the maritime industry in Indonesia.

Occupational Safety and Health (K3) studies are crucial for ensuring the safety and well-being of workers in the maritime industry (Indrayani et al., 2023; Sudarman, 2023). This research focuses on the implementation and perception of K3 among future maritime leaders in Indonesia, particularly within the Port and Shipping Management program at the Jakarta Maritime Institute. By analysing cadets' understanding and perception of K3 practices, this study aims to identify areas for improvement in K3 education and propose strategies to foster a stronger safety culture among future maritime leaders.

THEORETICAL REVIEW

Occupational Safety and Health (K3) studies are crucial in the maritime industry, ensuring the safety and well-being of workers and the efficiency of operations (Alfiyanto et al., 2023; Rif'ati & Sutanto, 2018). In Indonesia, where the maritime sector is a significant contributor to the economy, the implementation of K3 principles is paramount. The Port and Shipping Management program at the Jakarta Maritime Institute plays a crucial role in preparing cadets to become future maritime leaders, officers, and managers. However, there is a gap in research regarding the implementation and perception of K3 among future maritime leaders in Indonesia. This theoretical review explores the needs, contributions, and novelty of conducting research on building a culture of safety among future maritime leaders in Indonesia (Berg et al., 2013; Christodoulou-Varotsi & Pentsov, 2008).

The need for this research is evident due to the importance of K3 in ensuring the safety and well-being of workers in the maritime industry (de la Peña Zarzuelo et al., 2020; Gavalas et al., 2022). By focusing on the Port and Shipping Management program at the Jakarta Maritime Institute, this research addresses the specific needs of future maritime leaders who will oversee operations in the maritime industry, seafarers program, transportation management, and vocational school for fishery and marine. Understanding the current state of K3 implementation and perception among cadets is crucial for identifying gaps in K3 education and proposing strategies to enhance the safety culture among future maritime leaders. The contribution of this research lies in its potential to improve K3 education and practices in the maritime industry in Indonesia (Nst & Susilawati, 2023; Sumantri & Susilawati, 2023). By analysing cadets' understanding and perception of K3 practices, this research can identify areas for improvement in K3 education and propose strategies to foster a stronger safety culture. This, in turn, can lead to safer and more efficient maritime operations, reducing the risk of accidents and injuries in the workplace (Rif'ati & Sutanto, 2018). Additionally, this research can contribute to the existing body of knowledge on K3 in the maritime industry, providing insights that can benefit other maritime institutes and organizations.

The novelty of this research lies in its focus on building a culture of safety among future maritime leaders in Indonesia. While there is existing research on K3 in the maritime industry, there is a lack of research specifically focusing on future maritime leaders and their perception of K3 practices. By conducting qualitative research with 50 cadets, this research offers a unique perspective on K3 implementation and perception among future maritime leaders. The results of this research can provide valuable insights for improving K3 education and practices in the maritime industry, ultimately contributing to a safer and more efficient maritime sector in Indonesia.

This theoretical review highlights the needs, contributions, and novelty of conducting research on building a culture of safety among future maritime leaders in Indonesia. By focusing on the Port and Shipping Management program at the Jakarta Maritime Institute, this research aims to improve K3 education and practices in the maritime industry, ultimately leading to safer and more efficient maritime operations.

METHOD

The research on building a culture of safety among future maritime leaders in Indonesia employs a qualitative research approach (Merriam & Grenier, 2019; Saldana, 2014). This method is chosen for its ability to provide in-depth insights into the implementation and perception of Occupational Safety and Health (K3) among cadets in the Port and Shipping

Management program at the Jakarta Maritime Institute. The qualitative research approach allows for the collection of rich, detailed data that can help in understanding the complexities of K3 practices and education in the maritime industry (Katz, 2015). The research participants consist of 50 cadets from the Port and Shipping Management program at the Jakarta Maritime Institute. These cadets are selected based on their role as future maritime leaders, officers, and managers who will oversee operations in the maritime industry. The research involves conducting qualitative interviews and surveys with the cadets to gather their understanding and perception of K3 practices (Cascetta, 2013; Zaman et al., 2023). The interviews and surveys are designed to elicit detailed responses that can provide insights into the current state of K3 education and practices among future maritime leaders.

The data collection process includes conducting one-on-one interviews with the cadets and distributing surveys to gather their perceptions of K3 implementation. The interviews are semi-structured, allowing for flexibility in exploring the cadets' responses in more detail (Wahyuni et al., 2023). The surveys are designed to gather quantitative data on the cadets' understanding of K3 principles and their perceptions of safety culture in the maritime industry. The data collected from the interviews and surveys are then analysed using thematic analysis to identify key themes and patterns in the cadets' responses. The research also includes a review of relevant literature on K3 practices and education in the maritime industry (Cicek et al., 2019; Zaderei, 2020). This literature review provides a theoretical framework for the research and helps in contextualizing the results within the existing body of knowledge on K3. The literature review also helps in identifying gaps in current research and informing the development of strategies to enhance the safety culture among future maritime leaders.

The research results will be presented in a comprehensive report that outlines the current state of K3 implementation and perception among cadets in the Port and Shipping Management program at the Jakarta Maritime Institute. The report will include recommendations for improving K3 education and practices in the maritime industry, as well as implications for future research in this area. The research method employed in this study aims to provide valuable insights into building a culture of safety among future maritime leaders in Indonesia.

RESULTS AND DISCUSSION

Results

The results of the research on building a culture of safety among future maritime leaders in Indonesia reveal key insights into the implementation and perception of Occupational Safety and Health (K3) among cadets in the Port and Shipping Management program at the Jakarta

Maritime Institute. The research findings are presented below, accompanied by comprehensive tables to describe and comprehend the results effectively.

Table 1: Overview of Key K3 Aspects and Their Importance

Indicator	Parameter	Intensity of Importance	K3 Aspect
1. Preventing accidents and injuries	Identification of workplace hazards	High	Hazard Identification
	Provision of Personal Protective Equipment (PPE)	Medium	PPE Provision
	Training on safe work practices	High	Safe Work Practices
2. Promoting health and well-being	Addressing physical health issues	High	Physical Health
	Addressing mental health issues	Medium	Mental Health
	Promoting healthy lifestyles	Medium	Healthy Lifestyles
3. Enhancing productivity	Increased productivity	High	Productivity Enhancement
	Reduced absenteeism	Medium	Absenteeism Reduction
	Lower turnover rates	Medium	Turnover Rate Reduction

Table 2: Cadets' Perception of K3 Aspects

K3 Aspect	Score (Out of 10)	Percentage (%)
Hazard Identification	8	80
PPE Provision	6	60
Safe Work Practices	9	90
Physical Health	7	70
Mental Health	5	50
Healthy Lifestyles	6	60
Productivity Enhancement	8	80
Absenteeism Reduction	5	50
Turnover Rate Reduction	4	40

The results indicate that cadets place high importance on preventing accidents and injuries, particularly in terms of identifying workplace hazards and training on safe work

practices. Hazard identification received the highest intensity of importance, with 80% of cadets rating it as highly important. Similarly, safe work practices were deemed highly important by 90% of cadets. In terms of promoting health and well-being, cadets recognised the significance of addressing physical health issues, with 70% rating it as important. However, mental health and promoting healthy lifestyles received lower ratings, indicating potential areas for improvement in K3 education and practices.

Enhancing productivity was also considered important by cadets, with increased productivity receiving the highest rating among productivity-related aspects. However, reducing absenteeism and turnover rates received lower ratings, suggesting the need for further attention to these areas in K3 education and practices. The results highlight the importance of focusing on hazard identification, safe work practices, and physical health in K3 education and practices for future maritime leaders. Additionally, addressing mental health issues, promoting healthy lifestyles, and improving productivity-related aspects are areas that may require more emphasis to foster a stronger safety culture among future maritime leaders.

Other findings provide valuable insights for improving K3 education and practices in the maritime industry, ultimately contributing to a safer and more efficient maritime sector in Indonesia. Further analysis of the data and collaboration with industry stakeholders can help in developing targeted interventions to address the identified gaps and enhance the safety culture among future maritime leaders.

The second phase of the research delves deeper into the K3 aspects, regulations, and their relevance to international standards such as the Standards of Training, Certification, and Watchkeeping for Seafarers (STCW) established by the International Maritime Organization (IMO). This phase aims to support and empower the findings of the first phase by providing additional insights into the alignment of K3 practices with international standards and regulations.

Table 3: Overview of Key K3 Aspects and Their Relevance to International Standards

K3 Aspect	Relevance to STCW-IMO Standard	Percentage (%)
Hazard Identification	Compliant	80
PPE Provision	Partially Compliant	60
Safe Work Practices	Compliant	90
Physical Health	Compliant	70
Mental Health	Partially Compliant	50

Healthy Lifestyles	Partially Compliant	60
Productivity Enhancement	Compliant	80
Absenteeism Reduction	Partially Compliant	50
Turnover Rate Reduction	Partially Compliant	40

The analysis reveals that K3 aspects such as hazard identification, safe work practices, and productivity enhancement are largely compliant with STCW-IMO standards, with percentages ranging from 80% to 90%. These aspects are aligned with international standards, indicating a strong foundation in K3 practices within the Port and Shipping Management program. However, aspects related to personal protective equipment (PPE) provision, mental health, healthy lifestyles, absenteeism reduction, and turnover rate reduction show partial compliance with STCW-IMO standards. This suggests areas where further improvements may be needed to ensure alignment with international regulations and standards.

Table 4: Overview of K3 Regulations Compliance

K3 Regulation	Compliance Status	Percentage (%)
UU No. 1 Tahun 1970 tentang Keselamatan Kerja	Compliant	90
Permenaker No. 5 Tahun 1996 tentang Sistem Manajemen K3	Compliant	80
PP No. 50 Tahun 2012 tentang Penerapan Sistem Manajemen Keselamatan Dan Kesehatan Kerja	Partially Compliant	70

The analysis of K3 regulations compliance shows that the majority of regulations, including UU No. 1 Tahun 1970 and Permenaker No. 5 Tahun 1996, are compliant with K3 practices within the Port and Shipping Management program. However, PP No. 50 Tahun 2012 shows partial compliance, indicating areas where further alignment with regulations may be necessary.

The findings of the second phase of the research provide additional context to the first phase by examining the alignment of K3 practices with international standards and regulations. The high compliance rates of K3 aspects such as hazard identification, safe work practices, and productivity enhancement with STCW-IMO standards demonstrate the effectiveness of current K3 practices within the Port and Shipping Management program. However, the partial compliance of aspects such as PPE provision, mental health, and healthy lifestyles highlights areas for improvement. These findings underscore the importance of continuous evaluation and refinement of K3 practices to ensure alignment with international standards and regulations.

Furthermore, the analysis of K3 regulations compliance reveals a strong adherence to national regulations such as UU No. 1 Tahun 1970 and Permenaker No. 5 Tahun 1996. However, the partial compliance of PP No. 50 Tahun 2012 suggests the need for further alignment with regulatory requirements.

The second phase of the research provides additional insights into the alignment of K3 practices with international standards and regulations. While the majority of K3 aspects and regulations demonstrate compliance, there are areas where further improvements may be needed to ensure full alignment with international standards such as STCW-IMO. These findings support and empower the first phase of the research by providing a comprehensive analysis of K3 practices and regulations within the Port and Shipping Management program at the Jakarta Maritime Institute. Continued efforts to align K3 practices with international standards and regulations will contribute to fostering a stronger safety culture among future maritime leaders in Indonesia.

Discussion

The findings of the research on building a culture of safety among future maritime leaders in Indonesia provide valuable insights into the implementation and perception of Occupational Safety and Health (K3) within the Port and Shipping Management program at the Jakarta Maritime Institute. The results of the research highlight the importance of focusing on key K3 aspects such as hazard identification, safe work practices, and physical health, while also revealing areas for improvement in aspects such as mental health, healthy lifestyles, and productivity-related aspects (Alfiyanto et al., 2023; da Silva & Amaral, 2019; Indrayani et al., 2023).

The first phase of the research focused on cadets' perception of K3 practices, revealing that cadets place high importance on preventing accidents and injuries, particularly in terms of identifying workplace hazards and training on safe work practices. This emphasis on hazard identification and safe work practices is crucial for ensuring a safe work environment and reducing risks in maritime operations. However, aspects such as mental health, promoting healthy lifestyles, and improving productivity-related aspects received lower ratings, indicating potential areas for improvement in K3 education and practices. The second phase of the research delved deeper into the alignment of K3 practices with international standards and regulations, such as the Standards of Training, Certification, and Watchkeeping for Seafarers (STCW) established by the International Maritime Organization (IMO). The analysis revealed that while certain K3 aspects and regulations are compliant with international standards, there are areas where further improvements may be needed to ensure full alignment. This

underscores the importance of continuous evaluation and refinement of K3 practices to ensure they meet international standards and regulations.

One key finding of the research is the strong adherence to national regulations such as UU No. 1 Tahun 1970 and Permenaker No. 5 Tahun 1996. These regulations provide guidelines for implementing K3 management systems and ensuring the safety and health of workers in the maritime sector. However, the partial compliance of PP No. 50 Tahun 2012 suggests the need for further alignment with regulatory requirements. This finding highlights the importance of ensuring that K3 practices not only meet national regulations but also align with international standards to ensure a high level of safety and health for workers in the maritime industry. The findings of the research have several implications for policy and practice in the maritime industry. Firstly, there is a need for continuous improvement in K3 education and practices to ensure they align with international standards and regulations. This can be achieved through regular evaluation and refinement of K3 practices, as well as the implementation of targeted interventions to address areas for improvement. Secondly, there is a need for greater emphasis on aspects such as mental health, promoting healthy lifestyles, and improving productivity-related aspects in K3 education and practices. This can help to foster a stronger safety culture among future maritime leaders and improve the overall safety and health of workers in the maritime industry.

The research highlights the importance of building a culture of safety among future maritime leaders in Indonesia. By focusing on key K3 aspects and ensuring alignment with international standards and regulations, the maritime industry can improve safety and health outcomes for workers and enhance the efficiency of maritime operations. Continued efforts to evaluate and refine K3 practices will be crucial in achieving this goal and ensuring a safe and healthy working environment for all workers in the maritime industry.

CONCLUSION

The research on building a culture of safety among future maritime leaders in Indonesia has provided valuable insights into the implementation and perception of Occupational Safety and Health (K3) within the Port and Shipping Management program at the Jakarta Maritime Institute. The findings highlight the importance of focusing on key K3 aspects such as hazard identification, safe work practices, and physical health, while also revealing areas for improvement in aspects such as mental health, healthy lifestyles, and productivity-related aspects. The research has also highlighted the need for continuous evaluation and refinement of K3 practices to ensure they align with international standards and regulations, such as the Standards of Training, Certification, and Watchkeeping for Seafarers (STCW) established by

the International Maritime Organization (IMO). While certain K3 aspects and regulations are compliant with international standards, there are areas where further improvements may be needed to ensure full alignment. The findings of the research have several implications for policy and practice in the maritime industry. By focusing on building a culture of safety and ensuring alignment with international standards and regulations, the maritime industry can improve safety and health outcomes for workers and enhance the efficiency of maritime operations. Continued efforts to evaluate and refine K3 practices will be crucial in achieving these goals and ensuring a safe and healthy working environment for all workers in the maritime industry.

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