JOURNAL OF MARITIME RESEARCH

Vol XXII. No. I (2025) pp 201–207

ISSN: 1697-4840, www.jmr.unican.es

The Modeling Implementation Of A Safety Management System On Container Ships To Improve Indonesian Maritime Affairs

Honny Fiva Akira Sembiring[1], Willy Arafah[2], Prasadja Ricardianto[1], Endri Endri[3,*]

ARTICLE INFO

Article history:
Received 27 Jul 2024;
in revised from 30 Jul 2024;
accepted 08 Aug 2024.

Keywords:
safety management system, container ships, safety culture, technical and non-technical factors.

ABSTRACT

This research aims to identify and reveal the influence of factors that influence the implementation of safety management systems on ships aimed at ship crews and entrepreneurs and their impact on ships, crew, and cargo in the Indonesian Maritime world through a survey of 32 respondents representing officers, engineers, DPAs, as well as shipping entrepreneurs and ship data processing using NVivo 12 software. The research results show that two factors influence the implementation of the container safety management system, namely technical factors and non-technical factors. The order is (1) technical factors of the ship consisting of seaworthiness, safety equipment, stability (loading), and navigation systems, (2) non-technical factors, namely human factors (leadership model, crew competence, experience, psychology, crew training ship, and HR development) and company factors (rules and procedures, management capabilities, DPA). There are exciting findings about the positive relationship of the safety management system with the ship's crew. Based on these results, ship crews, companies, and international regulations have reasons to offer solutions for implementing the safety management system on board ships.

1. Introduction.

Maritime safety is a critical issue for Indonesia. In Indonesia, studies on marine safety are mainly carried out by state management institutions responsible for safety, especially for policies and legislation, namely Law Number 17 concerning Shipping 2008, concerning safety management systems on ships. Meanwhile, in the national context, safety rules are also regulated in Minister of Transportation Regulation Number PM 45 of 2012 concerning Ship Safety Management 2012, which contains policies and procedures for implementing company and ship safety management systems and Regulation of the Minister of Transportation of the Republic of Indonesia Number PM 61 of 2019 concerning the Seaworthiness of Indonesian Flag High-Speed Passenger Ships which contains safety. For this reason, IMO has established several regulations in the field of maritime transportation as standards to ensure ship safety (ISM Code), the safety of human lives at sea SOLAS 1974, and even marine marine MARPOL 1973/78 (Marine Pollution). In the context of international law. Likewise, with establishing conventions as standardization regarding the protection and safety of maritime transportation, STCW Manila Amendment 2010, MARPOL 1973/78 (Marine Pollution), LLC 1966, COLLREG 1972 (International Regulations for Preventing Collisions at Sea).

Apart from that, the professional organization appointed by IMO determines international conventions responsible for ship safety, namely the ISM Code and SOLAS, which discuss safety policies and rules set by international bodies that must be obeyed by all ships and companies so that these policies run smoothly. In terms of safety management, studies are about building a safety culture and awareness and complying with the rules (Rosnani, 2023; Kartoglu et al., 2023; Altinpinar & Başar, 2022; Naji et al., 2021; Andrei et al., 2020; Churruca et al., 2021; Gopala & Mokhtar, 2023; Barata et al., 2024) which has been determined to be an essential factor in managing the current

[1]Institute of Transportation and Logistics Trisakti, Jakarta, Indonesia.
[2]Universitas Trisakti, Jakarta, Indonesia.
[3]Universitas Mercu Buana, Jakarta, Indonesia.
*Corresponding author: Endri Endri. E-mail Address: endri@mercubuana.ac.id.

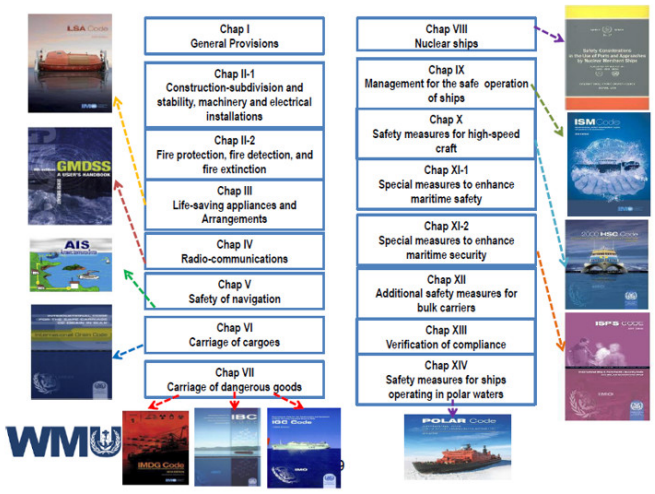
maritime safety system. Sea transportation, especially container transportation, is now the backbone of international trade. Most goods traded throughout the world are transported by container ships (Garrido et al., 2020; Tran et al., 2022; Wang et al., 2020; Rahmanita et al., 2023) making it an essential aspect of the global economy. Ship safety statistics and surveys show that compliance with the ISM Code (Li et al., 2022; Wang et al., 2023; Gu et al., 2023) and SOLAS (Joseph & Dalaklis, 2021; Eriksson & Gregory, 2022; Melnyk et al., 2022; Ricardianto et al., 2021) has worsened in recent years due to accidents, deaths, and excessive marine pollution.

2. Literature Review and Research Line of Thought.

Goerlandt et al. (2022) stated that SMS is an organizational instrument used to develop, plan, measure, analyze, and monitor the overall safety performance of an organization and guide decision-making when selecting safety functions. Li and Guldenmund (2018) reveal that SMS is caused by accidents and incidents and ways to investigate accidents or dangerous situations and explain the mechanisms causing accidents that can be developed. Accidents and incidents will also occur due to several factors, including fatigue at work. This study also shows that several factors influence incidents that occur on ships. Uflaz et al. (2022) revealed that the ISM Code establishes safety standards for the safe management and operation of ships and various procedures and formalities to improve safety at the operational level on board ships. Mok et al. (2023) stated that one of the factors causing accidents refers to Chapters 5 and 6 of the ISM Code, namely Human Factors and the Responsibility and Authority of the Master. Chuasanga and Victoria (2021) stated that the ISM Code is an SMS standard for the safe operation of ships and the prevention of marine pollution. It aims to ensure maritime safety, prevent accidents and casualties, and prevent damage to the environment and ships. Please note that SOLAS is the primary parent that plays a vital role in the ISM Code. ISM Code is issued from the SOLAS chapter. SOLAS AMENDMENT 2008 and 2009 emphasize that the International Convention for the Safety of Passengers at Sea is the main agreement/convention that protects the safety of commercial ships. The first version was published in 1914 after the sinking of the RMS Titanic. Regarding SOLAS 1974, this research strongly supports several studies regarding compliance with the SOLAS Convention through a series of activities designed to improve national operational and technical capabilities (Djunaidi et al., 2021; Eriksson & Gregory, 2022; Melnyk et al., 2022; Wahyuni et al., 2022). Guevara and Dalaklis (2021) revealed fourteen codes related to the SOLAS convention in the form of a chart considering certain aspects of ship safety.

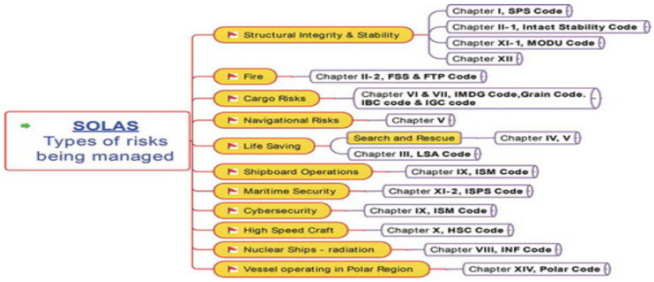
Joseph and Dalaklis (2021) explain several editions of SOLAS that have been described. SOLAS also has types of managing risks discussed in the 1974 SOLAS Convention, which can be grouped into the following (non-exhaustive) list of eleven different (but interrelated) types: Classification of risks managed in SOLAS 1974 and associated major risk mitigation chapters. So, apart from the core variables, the author will explain the operational definition of risk management.

Figure 1



Source: Guevara and Dalaklis (2021).

Figure 2

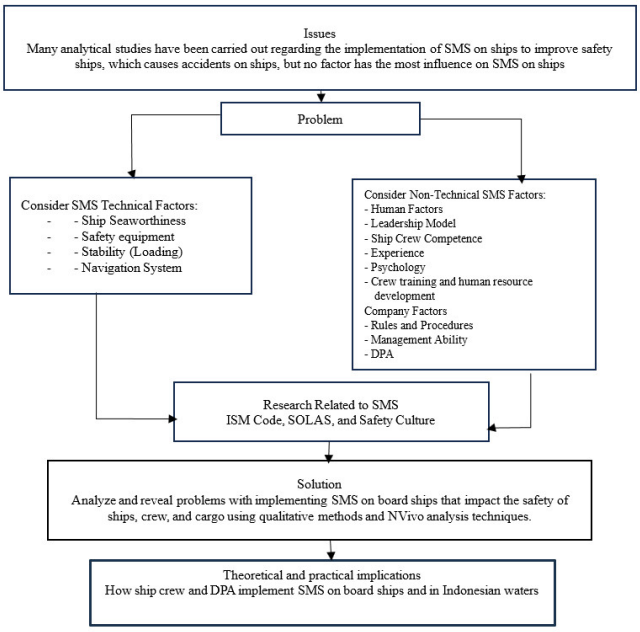


Source: Joseph and Dalaklis (2021).

3. Methodology.

To achieve the research objectives that have been set, the author uses qualitative research methods. In the qualitative research method, the author chose the in-depth expert interview technique (in-depth interview) as the primary method with a total of 32 informants consisting of (Master et al. (Designated Person Ashore), ship operational managers, shipping entrepreneurs, marine academics, and marine inspectors. Qualitative research includes document research, references, and selecting relevant typical studies, followed by determining the research model and designing a preliminary survey with a list of questions. After determining the research objectives, the factors influencing the implementation of qualitative research are then determined through a literature review, references, and selection of relevant representative studies, followed by creating a research model and, finally, designing a pilot study using in-depth interviews. After determining the research objectives, the factors that will influence the implementation of the ship safety management system will be determined next. The author first summarizes previous theories and research regarding ship safety and safety management systems to achieve this goal. The primary data sources used are scientific articles, research papers, book chapters, book editions, international scientific jour-

Figure 3



Source: Authors.

nals, indicators, and institutional frameworks for implementing safety management systems on ships, especially in Indonesian waters.

From the results of these steps, the author identifies factors that influence implementing a safety management system. The factors that cause problems are technical and non-technical factors. In this case, technical factors are the ship's seaworthiness, safety equipment, stability (loading), and navigation systems. Non-technical factors (human factors), namely management model, crew competence, experience, psychology, crew training, and human resource development. Company factors, namely rules and procedures, management capabilities, and DPA. This process results in a final survey with a complete series of questions. In-depth interviews were conducted with the Master, Officer, Engineer, and DPA on board the ship in Indonesian waters. The survey period is from December to March. There are 15 questions related to ship safety along with ISM Code and SOLAS regulations. After conducting interviews, the data was processed using NVivo 1 software. Then, the author identified themes and sub-themes from each node's coding project map images in Nvivo. The results are a model to evaluate the impact of technical and non-technical factors in implementing the safety management system on board the ship.

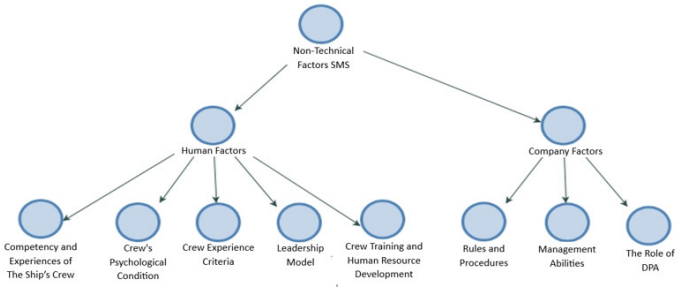
4. Results.

Based on the results of data processing in the NVivo12 software, it shows that of the 32 respondents: 3 Masters, 3 Chief Officers, 3 Second Officers, 3 Third Officers, 3 Chief Engineers, 3 First Engineers, 3 Second Engineers, 3 Third Engineers, 2 DPAs, 2 Marine Inspectors, 2, Marine Academics, 2 Shipping Entrepreneurs indicate that the dominant non-technical factor in this research is the human factor.

4.1. Consideration of Non-Technical Factors.

The following is a general description of the results of coding data analysis for Non-Technical Factors related to the implementation of SMS on board ships:

Figure 4: Data Visualization Project Map General Code Non-Technical Factors.

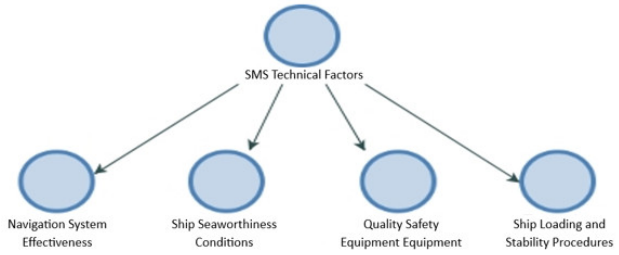


Source: Authors.

4.2. Consideration of SMS Technical Factors.

The following is a general description of the results of coding Technical Factors related to the implementation of SMS on board ships:

Figure 5: Data Visualization Project Map General Code Technical Factors.



Source: Authors.

4.3. Increased SMS implementation on board ships.

The following is Table 1 thematic analyses that identify themes and sub-themes from the coding project map image in Nvivo 12 for the node for improving SMS implementation on board:

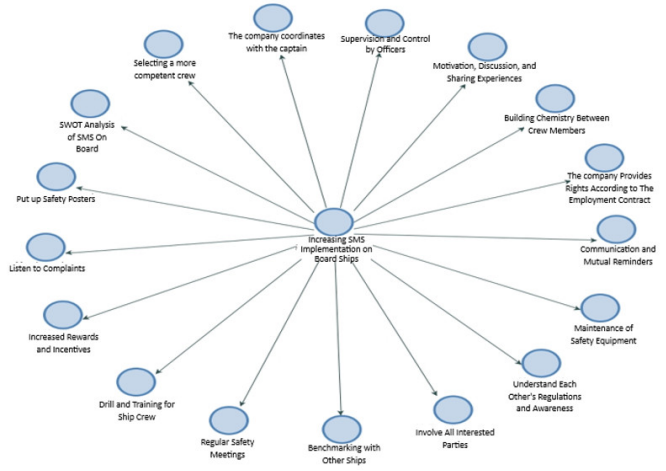
Table 1: Increased SMS implementation on board ships.

Nodes

Name	Files	References	Created On
Improved SMS implementation on ships	0	0	15/02/2024 14:38
SWOT Analysis of SMS on Board	1	1	16/02/2024 13:49
Comparison with Other Ships	1	1	16/02/2024 13:49
Crew Training and Training	20	23	15/02/2024 15:11
Increased Rewards and Incentives	7	7	16/02/2024 13:20
Communication and Reminding Each Other	13	13	16/02/2024 13:20
Maintenance of Safety Equipment	1	1	16/02/2024 18:34
Involve All Interested Parties	3	3	16/02/2024 13:49
Understand Each Other's Regulations and Awrn	13	16	15/02/2024 14:41
Put up Safety Posters	7	7	16/02/2024 13:21
Building Chemistry between Crew Members	2	2	16/02/2024 14:06
Listen to Complaints	1	1	17/02/2024 14:07
Selecting a more Competent Crew	1	1	16/02/2024 18:46
Motivation, Discussion, and Sharing Experience	4	4	15/02/2024 15:11
Supervision and Control by Officers	1	1	17/02/2024 16:04
The Company Coordinates with The Master	1	1	16/02/2024 20:04
The Company Provides rights according to The	3	3	17/02/2024 12:03
Regular Safety Meetings	4	4	16/02/2024 18:34

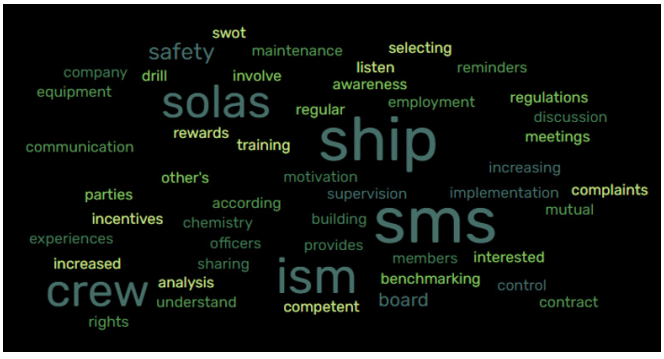
Source: Authors.

Figure 6: Visualization of Project Map Node Data to Improve SMS Implementation on Ships.



Source: Authors.

Figure 7: Word Cloud Solution and Implication.



Source: Authors.

The word cloud formed from the transcripts of interviews with various informants regarding the implementation of the ISM Code, SOLAS, and safety factors on board ships shows several dominant keywords such as ”ship,” ”safety,” ”SOLAS,” ”SMS,” and ”ISM.” The qualitative analysis of the transcripts found that the collective awareness and in-depth understanding of the work team on board the ISM Code and SOLAS were critical factors in ensuring the effectiveness of the implementation of the Safety Management System (SMS).

5. Discussion.

Through 2 considerations of technical and non-technical factors as well as 17 thematic analyses that have been identified by themes and sub-themes from the image of the coding project map in Nvivo above, we can see that non-technical SMS factors (human factors) have the most significant impact on the implementation of the safety management system on board the ship. SMS also helps increase ship crew competency and knowledge about maritime safety practices, emergency procedures, and risk management (Farisyi et al., 2024; Larrea et al., 2022). Ship crews must be competent according to standards issued by STCW (Zhu, 2020; Majid et al., 2024). SMS, which includes strict safety standards, can provide a sense of security and protection for ship crews (Bliš̆anová et al., 2021; Uflaz et al., 2022). The application of SMS and the psychological condition of the ship's crew are components related to the ship's physical conditions and work environment. Ship physical conditions can influence crew work performance (Brooks & Greenberg, 2022; Nittari et al., 2022; Al-Balushi et al., 2022; Ricardianto et al., 2022). SMS can also include programs and training aimed at helping crew members manage the stress and pressure associated with working on ships (Mann, 2020; Nicholas & Qurniawati, 2020). The application of SMS and the psychological condition of the ship's crew are components related to the ship's physical conditions and work environment. Ship physical conditions can influence crew work performance (Brooks & Greenberg, 2022; Nittari et al., 2022; Al-Balushi et al. 2022; Alhempi et al., 2024). The criteria for ship crew experience are related to qualifications, experience, training, and COC and COP certificates so that they can implement SMS by standards (Suiter & Sarli, 2019; Szcześniak, 2013). SMS is closely related to the leadership model on board the ship. In this case, the Master/Captain is important in controlling all activities on board the ship (Kumar et al., 2023; Harris et al., 2023). The leader regularly monitors and evaluates the effectiveness of SMS on board the ship. Leaders also ensure that SMS is implemented correctly. One of the critical aspects of effective leadership is creating a culture of safety (Tetzlaff et al., 2021; Altinpinar & Başar, 2022; Majid et al.,2022).

Moreover, leaders must integrate safety considerations into strategic and operational decisions, and prioritize safety when evaluating risks and opportunities (Hasanspahić et al., 2021; Hapsari et al., 2021)—the results of the Project Map Node data visualization regarding the competency and experience of the ship crew. Psychological conditions of the ship crew, crew experience criteria, leadership models, and crew training and human resource development significantly impact the implementation of safety management on board ships. Companies, in this case, shipping entrepreneurs, must be more honest in taking steps to limit risks Sprajcer et al. (2022) in implementing the safety management system on ships. Especially in selecting ship crew and providing for the needs of the ship's crew, both

psychological needs and the need to carry out training on board the ship, which involves all parties.

Conclusions.

Through research topics, the author has found that SMS implementation on ships must comply with the ISM Code and SOLAS conventions, which can affect the safety of ships, crew, and cargo. As for SMS implementation issues, it is essential to identify weaknesses and potential risks that must be addressed. This research also aims to provide SMS solutions that can be implemented on ships to improve safety, crew, and cargo. The proposed solution is expected to overcome the problems identified in the current SMS implementation and positively impact improving the safety system on ships. The relationship between the ship's technical and non-technical aspects of the implemented SMS is essential. Both technical aspects include the provision of international conventions such as SOLAS and ISM Code.

I recommend increased training and education for crew members on using and implementing new SMS solutions. This includes training on using new technology tools, safety procedures, and response in emergencies and implementing ongoing evaluation and monitoring programs to ensure the effectiveness and reliability of implemented SMS solutions. This can involve regular audits, data collection, and system performance analysis. It recommends safety culture awareness for all ship crew, the development of procedural guidance carried out by the Company, which the DPA directly monitors, and the Master's commitment to implementing SMS on the ship. Future researchers are expected to examine more sources or references related to the object.

References.

Al-Balushi, S., Behforouzi, M., Al-Balushi, M., Al-Mahrazi, M., & Al-Alawi, Z. (2022). How do the Depression and Mental Health of Crew Members Create Threats to The Shipping Industry? Journal of Maritime Research, 19(1).

Alhempi, R.R., Ola, L.O.L., Junaidi, A., Satriadi, S., Supeno, B., & Endri, E. (2024). Effects of Leadership and Work Discipline on Employee Performance: The Mediation Role of Work Motivation. Quality Access to Success, 25(198), 372-380. https://doi.org/10.47750/QAS/25.198.39.

Altinpinar, İ., & Başar, E. (2022). Investigation of the effect of vessel type on seafarers' safety culture. International Journal of Occupational Safety and Ergonomics, 28(3). https://doi.org/-10.1080/10803548.2021.1916209.

Andrei, D., Grech, M. R., Griffin, M., & Neal, A. (2020). Assessing the determinants of safety culture in the maritime industry. International Journal of Maritime Engineering, 162(A4). https://doi.org/10.5750/ijme.v162iA4.1143.

Barata, F., Ricardianto, P., Haq, L., Octaviani, R., Ariohadi, M., Sitorus, P., & Endri, E. (2024). Safety risk and operational efficiency on logistic service providers' sustainable coal supply chain management.Uncertain Supply Chain Management, 12(1), 461-470. DOI: 10.5267/j.uscm.2023.9.006.

Blišťanová, M., Kešeľová, M., & Brůnová, Ľ. (2021). A systematic review of safety management system (SMS) in aviation with a focus on the safety level. Scientific Journal of Silesian University of Technology. Series Transport, 113. https://doi.org/-10.20858/SJSUTST.2021.113.3.

Brooks, S. K., & Greenberg, N. (2022). Mental health and psychological wellbeing of maritime personnel: a systematic review. BMC Psychology, 10(1). https://doi.org/10.1186/s40359-022-00850-4.

Chuasanga, A., & Victoria, O. A. (2021). ISM-Code as a legal protection of use ships is not conditioned By the marine standard in Indonesia. Jurnal Pembaharuan Hukum, 8(1), 95-104.

Churruca, K., Ellis, L. A., Pomare, C., Hogden, A., Bierbaum, M., Long, J. C., Olekalns, A., & Braithwaite, J. (2021). Dimensions of safety culture: A systematic review of quantitative, qualitative and mixed methods for assessing hospital safety culture. BMJ Open, 11(7). https://doi.org/10.1136/bmjopen-2020-043982.

Djunaidi, Z., Tantia, A. A., & Wirawan, M. (2021). Analysis of the safety resilience implementation in the maritime industry at public and private companies (a case study in Indonesia). Safety, 7(3), 56.

Eriksson, O., & Gregory, K. (2022). The new normal for coastal states. The 40th International Southern African Transport Conference on 04 -08 July 2022, 1.

Farisyi, S., Ricardianto, P., Purnaningratri, I., Setyawati, A., Negara, G., Weda, I., Widyaningrum, N., Sudewo, G., Saputra, C & Endri, E. (2024). Seafarer work stress and performance: Empirical evidence of shipping safety of Indonesia national shipping companies.Uncertain Supply Chain Management, 12(2), 1297-1306. doi: 10.5267/j.uscm.2023.11.007.

Garrido, J., Sauri, S., Marrero, Á., Gül, U., & Rúa, C. (2020). Predicting the future capacity and dimensions of container ships. Transportation Research Record, 2674(9). https://-doi.org/10.1177/0361198120927395.

Goerlandt, F., Li, J., & Reniers, G. (2022). The landscape of safety management systems research: A scientometric analysis. Journal of Safety Science and Resilience, 3(3). https://doi.org/-10.1016/j.jnlssr.2022.02.003.

Gopala, S., & Mokhtar, N. F. (2023). Factors Affecting Asian Seafarers' Safety Culture Practices under the Safety Management System. AIP Conference Proceedings, 2746(1). https:-//doi.org/10.1063/5.0152260.

Gu, S., Fu, S., & Zhang, Y. (2023, June). A Preliminary Investigation of Risk Control Options for Maritime Accidents in Arctic Waters. In International Conference on Offshore Mechanics and Arctic Engineering (Vol. 86885, p. V006T07A030). American Society of Mechanical Engineers. https://doi.org/10.-1115/OMAE2023-105765.

Guevara, D., & Dalaklis, D. (2021). Understanding the interrelation between the safety of life at sea convention and certain IMO codes. TransNav, 15(2). https://doi.org/10.12716/100-1.15.02.15.

Hapsari, D., Riyanto, S. & Endri, E. (2021). The Role of Transformational Leadership in Building Organizational Citizenship: The Civil Servants of Indonesia. Journal of Asian Fi-

nance, Economics, and Business, 8(2), 595-604. https://doi.org-/10.13106/jafeb.2021.vol8.no2.0595.

Harris, A., Azorín, C., & Jones, M. (2023). Network leadership: a new educational imperative? International Journal of Leadership in Education, 26(5). https://doi.org/10.1080/13603-124.2021.1919320.

Hasanspahić, N., Frančić, V., Vujičić, S., & Mandušić, M. (2021). Safety leadership as a means for safe and sustainable shipping. Sustainability (Switzerland), 13(14). https://doi.org/-10.3390/su13147841.

Joseph, A., & Dalaklis, D. (2021). The international convention for the safety of life at sea: highlighting interrelations of measures towards effective risk mitigation. Journal of International Maritime Safety, Environmental Affairs, and Shipping, 5(1). https://doi.org/10.1080/25725084.2021.1880766.

Kartoglu, C., Senol, Y. E., & Kum, S. (2023). Safety culture of navigators in terms of bridge operations on high-speed crafts. Australian Journal of Maritime and Ocean Affairs, 15(3). https://doi.org/10.1080/18366503.2022.2076380.

Kumar, D., Mishra, D., Dashora, J., & Kr Dubey, D. (2023). The Impact of Transformational Leadership on Employee Engagement and Performance: A Comprehensive Review. International Journal of Advanced Research in Science, Communication and Technology (IJARSCT) International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal, 3(1).

Larrea, M. F., Hodge, S., Mavin, T. J., & Kikkawa, Y. (2022). Becoming cabin crew: a situated learning approach to training and workplace experience. Research in Post-Compulsory Education, 27(4). https://doi.org/10.1080/13596748.2022.2110778.

Li, J., Sun, X., Dai, X., Zhang, J., & Liu, B. (2022). Policy Analysis on Recycling of Solid Waste Resources in China—Content Analysis Method of CNKI Literature Based on NVivo. In International Journal of Environmental Research and Public Health (Vol. 19, Issue 13). https://doi.org/10.3390/ijerph19137-919.

Li, Y., & Guldenmund, F. W. (2018). Safety management systems: A broad overview of the literature. In Safety Science (Vol. 103). https://doi.org/10.1016/j.ssci.2017.11.016.

Majid, S. A., Endri, E., Zakaria, M., Setiawan, E. B., Kamar, K., & Pahala, Y. (2024). The Impact of Shipmaster Leadership Style and Ship Logistics Management on Ship Crews Performance: Implications For Tanker Ship Operational Performance. Jurnal Aplikasi Bisnis dan Manajemen (JABM), 10(1), 186-186. https://doi.org/10.17358/jabm.10.1.186.

Majid, S. A., Yundriana, R., Soepriyadi, I., Pahala, Y., Fachrial, P., Setiawan, A., Wardana, A., Soekirman, A., Nofrisel, Fahriza, B., Hikmawati, N. K., & Endri, E. (2022). Strategies for Improving Air Connectivity in Indonesia through the Indonesian, Malaysia and Thailand Growth Triangle Cooperation. Academic Journal of Interdisciplinary Studies, 11(5), 62-72. https://doi.org/10.36941/ajis-2022-0125.

Mann, I. (2020). The right to perform rescue at sea: Jurisprudence and drowning. German Law Journal, 21(3). https://-doi.org/10.1017/glj.2020.30.

Melnyk, O., Onyshchenko, S., Pavlova, N., Kravchenko, O., & Borovyk, S. (2022). International Journal of Computer Science and Network Security. International Journal of Computer Science and Network Security, 22(03), 135-140.

Mok, I. S., D'Agostini, E., & Ryoo, D. K. (2023). A validation study of ISM Code's continual effectiveness through a multilateral comparative analysis of maritime accidents in Korean waters. Journal of Navigation, 76(1). https://doi.org/10.1017/S-0373463322000571.

Naji, G. M. A., Isha, A. S. N., Mohyaldinn, M. E., Leka, S., Saleem, M. S., Rahman, S. M. N. B. S. A., & Alzoraiki, M. (2021). Impact of safety culture on safety performance; mediating role of psychosocial hazard: An integrated modelling approach. International Journal of Environmental Research and Public Health, 18(16). https://doi.org/10.3390/ijerph18168568.

Nittari, G., Gibelli, F., Bailo, P., Sirignano, A., & Ricci, G. (2022). Factors affecting mental health of seafarers on board merchant ships: A systematic review. Reviews on Environmental Health. https://doi.org/10.1515/reveh-2021-0070.

Nurcholis, G., & Qurniawati, M. (2020). Psychological well being, Stress at Work and Safety Behaviour at Sea of Seafarer on Shipping Company. Technium Soc. Sci. J., 12(1 SE-Psychology).

Rahmanita, M., Ricardianto, P., Wijayanti, R., Agusinta, L., Asmaniati, F., Djati, S., Tatiana, Y., Arafah, W., Amsyari, I & Endri, E. (2023). The impact of the safety of passenger ship services on the development of water recreation: evidence from Indonesia. Uncertain Supply Chain Management, 11(3), 1121-1132. doi: 10.5267/j.uscm.2023.4.010.

Ricardianto, P., Lermatan, E., Thamrin, M., Abdurachman, E., Subagyo, H., Priadi, A., & Endri, E. (2022). Impact of loading and unloading productivity on service user satisfaction. Uncertain Supply Chain Management, 10(3), 845-854. doi: 10.5267/j.uscm.2022.3.010.

Ricardianto, P., Sakti, R. F. J., Sembiring, H. F. A., & Abidin, Z. (2021). Safety Study on State Ships and Commercial Ships According to The Requirements of Solas 1974. Journal of Economics, Management, Entrepreneurship, and Business (JEMEB), 1(1), 1-11.

Rosnani, R. (2023). Analysis Of The Application Of Safety Culture On Motor Sailing Vessels In Supporting Shipping Safety. International Journal of Marine Engineering Innovation and Research, 8(3). https://doi.org/10.12962/j25481479.v8i3.18442.

Sprajcer, M., Thomas, M. J. W., Sargent, C., Crowther, M. E., Boivin, D. B., Wong, I. S., Smiley, A., & Dawson, D. (2022). How effective are Fatigue Risk Management Systems (FRMS)? A review. Accident Analysis and Prevention, 165. https://doi.org/10.1016/j.aap.2021.106398.

Suiter, A. M., & Sarli, C. C. (2019). Selecting a Journal for Publication: Criteria to Consider. Missouri Medicine, 116(6).

Szcześniak, J. A. (2013). Importance of the on board crew trainings and drills for the improvement of the vessels' safety. Prace Wydziału Nawigacyjnego Akademii Morskiej w Gdyni, (28), 88-95. https://doi.org/10.12716/1002.28.11.

Tetzlaff, E. J., Goggins, K. A., Pegoraro, A. L., Dorman, S. C., Pakalnis, V., & Eger, T. R. (2021). Safety Culture: A Retrospective Analysis of Occupational Health and Safety Mining Reports. Safety and Health at Work, 12(2). https://doi.org/1-0.1016/j.shaw.2020.12.001.

Tran, N. K., Lam, J. S. L., Jia, H., & Adland, R. (2022). Emissions from container vessels in the port of Singapore. Maritime Policy and Management, 49(3). https://doi.org/10.1080/0-3088839.2021.1980236.

Uflaz, E., Akyuz, E., Arslan, O., & Celik, E. (2022). A quantitative effectiveness analysis to improve the safety management system (SMS) implementation on-board ship. Safety Science, 156. https://doi.org/10.1016/j.ssci.2022.105913.

Wahyuni, T., Ricardianto, P., Harits, A., Thamrin, M., Liana, E., Anggara, D., Abidin, Z., Setyowati, T., Sugiyanto, S & Endri, E. (2022). The implementation of minimum service standards on ship operational performance: Empirical evidence from Indonesia.Uncertain Supply Chain Management, 10(4), 1297-1304. DOI: 10.5267/j.uscm.2022.7.010.

Wang, B., Lin, Q., Wang, Y., & Tang, S. (2023). Policy Analysis of the Integration of Sports and Medicine against the Backdrop of "Healthy China": A Qualitative Study Using NVivo. International Journal of Environmental Research and Public Health, 20(3). https://doi.org/10.3390/ijerph20032079.

Wang, Z., Silberman, J. A., & Corbett, J. J. (2020). Container vessels diversion pattern to trans-Arctic shipping routes and GHG emission abatement potential. Maritime Policy and Management. https://doi.org/10.1080/03088839.2020.1795288.

Zhu, G. (2020). STCW Convention Changes and Its Impact on Crew. International Journal of Social Science and Education Research, 3(4), 170–176. https://doi.org/ 10.6918/IJOSSER.20-2004_3(4).0022