

Supporting Seafarer Mental Health: The Role of Nigerian Maritime Education and Training Institutions

MM Gaddafi[†]

A Pazaver[‡]

I Bartusevičienė[§]

ABSTRACT

This article presents the results of an exploration into the mental health and wellbeing of Nigerian seafarers, emphasising the contributions of Nigerian maritime education and training (MET) institutions. Specifically, the article investigates how MET institutions can support the mental health and wellbeing of seafarers by examining existing challenges and potential interventions. It examines the role that Nigerian MET institutions can play to address mental health challenges. Data was collected from a sample of 80 Nigerian seafarers and instructors from two Nigerian MET institutions in Lagos State. A mixed-methods approach was used, combining quantitative data from surveys with Nigerian seafarers and qualitative data from interviews with instructors from Nigerian MET institutions. The findings highlight some key steps to be taken to address the issues of mental health and wellbeing, including the implementation of mental health training; the integration of mental health awareness and sensitisation into seafarer training curricula; the introduction of counselling services and support measures; a consideration of government policies; and stakeholder engagement. The suggested interventions aim to develop a more supportive environment in the Nigerian maritime sector, by applying preventive measures based on the assessment of current needs.

KEYWORDS: mental health, wellbeing, Nigerian seafarers, maritime education and training (MET)

1 INTRODUCTION

The mental health and wellbeing of seafarers report by the United Nations Conference on Trade and Development (UNCTAD) (UNCTAD, 2022) stated that the global population of seafarers exceeds 1.9 million, many of whom struggle with mental health issues. These seafarers often lack awareness of their symptoms or feel uncomfortable with their experiences, family, friends, colleagues and society. A 2019 survey released by Yale University and the International Transport Workers' Federation's (ITF) Seafarers Trust found

that depression and anxiety are the most dominant mental health problems affecting seafarers (Lefkowitz & Slade, 2019). Work-related factors are shown to have a considerable influence on seafarer's mental health. The Australian Maritime Safety Authority found that 49.7 per cent of mental health problems are attributed to job-related stress, weariness, inadequate sleep and restricted work resources (Andrei et al., 2020). Moreover, a study from Cardiff University showed that factors that negatively affect mental wellbeing include insufficient opportunities for time off, feeling alone, apprehension of being criminalised, seclusion,

[†] Senior Maritime Labour Officer, Nigerian Maritime Administration & Safety Agency (Nimasa), E-mail: w1015622@wmu.se

[‡] Lecturer and ESSP Coordinator, World Maritime University, E-mail: apz@wmu.se

[§] Associate Professor, World Maritime University, E-mail: ib@wmu.se

separation from loved ones and anxiety over job loss (Sampson & Ellis, 2019). Furthermore, the elements that contribute to mental wellbeing are connected to seafarers' living and work conditions, including factors such as internet availability, time off from work, interpersonal connections while on board, recreational activities, housing arrangements and physical wellbeing (Carrera-Arce, Bartusevičienė & Divari, 2022).

The unique features of life on board expose seafarers to unique mental health challenges and directly impact maritime safety by affecting their performance and decision-making under stress. Poor mental health can lead to fatigue and diminishes communication and teamwork, which could increase the risk of errors. Furthermore, untreated mental health issues can lead to physical problems and affect a seafarer's ability to perform their duties safely, thereby compromising maritime safety. Maritime education and training (MET) can play a key role in promoting seafarer mental health and wellbeing. Initiatives by MET institutions to integrate mental health into seafarer training curricula support awareness raising and recognition of mental health issues, and equip seafarers with skills and coping strategies to better manage the challenging conditions of life onboard (Ajayi & Udeh, 2024; Doyle et al., 2016).

Little research has been done on the role of MET institutions to address mental health issues affecting seafarers and the Nigerian context is a particularly underexplored area. Like all seafarers, Nigerian seafarers encounter stressors, such as extended absences from home, isolation, demanding work conditions and exposure to severe environments that may significantly affect them. Furthermore, the current measures and initiatives that are being implemented to enhance the mental health support provided to seafarers in Nigeria are frequently insufficient and fragmented (Okeleke & Aponjolosun, 2020). With this in mind, this study aims to examine seafarers' mental health and wellbeing from the Nigerian MET perspective by assessing the role that MET institutions could play to address mental health and wellbeing challenges affecting Nigerian seafarers.

II LITERATURE REVIEW

Mental health challenges for seafarers

The World Health Organization (2022) defines mental health as 'a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community'. The issue of mental health and wellbeing is particularly critical for seafarers whose working conditions onboard expose them to unique stressors. Ensuring seafarers' mental health is essential not only for their personal wellbeing but also for the safety of vessels, cargo and the environment. Crew members often work 10 to 12 hour shifts for days at a time, without a break and they are typically engaged on board for 6 to 8 months at a time (Ogbodum et al., 2022). Studies show that long work shifts and long-term contracts affect seafarers' mental health (Nittari et al., 2022) and contribute to further psychological pressures, such as loneliness, isolation and sleep deprivation (Carrera-Arce, Bartusevičienė & Divari, 2022), and to high levels of fatigue and stress (Mansyur et al., 2021). Lefkowitz & Slade (2019) report that the most at-risk time for a seafarer experiencing an episode of mental ill-health is when their voyage is extended beyond the time that they were expecting to be relieved.

The isolated and remote nature of maritime work also affects seafarers' social lives and access to support. The challenge of being away from home and family for long periods is exacerbated by difficulties in establishing social ties on board because of the multinational, multicultural nature of crews and related language barriers. The resulting lack of camaraderie, along with restricted social and leisure options, can exacerbate feelings of loneliness and isolation (Oldenburg & Jensen, 2019). Moreover, worrying about access to medical care in the event of a physical or mental illness can affect seafarers' wellbeing (Brooks & Greenberg, 2022). A study of cruise ship employees during the Covid-19 pandemic (Radic et al., 2020) revealed anxiety with regard to perceived weaknesses in contingency planning for health crises and managing the on employees.

Impact of seafarers' mental health challenges on maritime safety

Seafarers have been voyaging since the earliest stages of human civilisation, facing challenges such as global pandemics, armed conflicts, pirate assaults and mechanical breakdowns. They oversee operations on different vessels and manage diverse types of cargo to ensure its secure arrival at designated locations (Famous, et al., 2023). Their job is vital to maritime safety, thus their mental health has a direct impact on their capacity to remain vigilant, make wise judgements and react to crises at sea. As an essential part of maritime safety, mental health needs to be appropriately addressed by the relevant stakeholders (Hystad & Eid, 2016).

Supporting seafarers' mental health and wellbeing is of paramount importance because of risk factors such as accidents, illness, heavy workloads and inaccessibility of timely medical treatment. Such factors have an impact on seafarers' ability to perform their duties on board, which affects maritime safety (Lefkowitz & Slade, 2019). Poor mental health can undermine seafarers' decision-making abilities and overall performance, increasing the potential for human error, leading to accidents or incidents to happen at sea (Nittari et al., 2022).

Role of MET in addressing seafarers mental health and wellbeing

Research shows that MET play an essential role in supporting seafarers' mental health and wellbeing. According to Abila (2022), the promotion of seafarer mental health by way of education helps to build psychological resilience in the intensely demanding maritime work environment, contributing to maritime safety. Research shows that targeted training and awareness-raising regarding mental health and wellbeing is increasingly relevant, given the increasing incidence of poor mental health and wellbeing among seafarers (Lefkowitz & Slade, 2019). The literature reveals those addressing seafarers' mental health and wellbeing in the context of MET takes multiple approaches. Various strategies, including stress management programmes, cultural interventions and the inclusion of mental health training in seafarer training curricula,

aim to equip crews with the resources to manage stress and recognise mental health challenges early on (Ajayi & Udeh, 2024). These resilience training initiatives emphasise coping strategies, problem-solving skills and emotional regulation through mindfulness, aimed at fostering a resilient crew capable of adapting to the demanding marine environment (Doyle et al., 2016). To ensure the effectiveness of mental health programmes is sustained, Brooks and Greenberg (2022) advocate the use of evidence-based techniques and collaboration among maritime stakeholders.

Regulatory frameworks like the Standards of Training, Certification and Watchkeeping for Seafarers (STCW) Convention underscore these efforts by mandating stress management and teamwork training as part of certification requirements (Ajayi & Udeh, 2024). As industry stakeholders, including MET institutions, increasingly recognise the importance of proactive mental health measures, initiatives such as resilience training and health education have been implemented to promote long-term mental wellbeing among seafarers (Li et al., 2022). These efforts collectively contribute to a safer and more supportive environment by equipping seafarers with the necessary tools and resources to manage their mental health effectively.

III METHODOLOGY

The study used a mixed-methods approach, combining qualitative and quantitative methodologies to examine the role of MET institutions in addressing mental health challenges experienced by Nigerian seafarers. This methodology enabled the gathering comprehensive quantitative data, using surveys of Nigerian seafarers, and detailed qualitative insights, by interviewing six instructors from two Nigerian MET institutions. The questionnaire consisted of close-ended and open-ended questions, and a sample of 80 Nigerian seafarers participated in this study. Two forms of collecting data were used, the first was conducted by distributing a paper questionnaire (manually) to the Nigerian seafarers who visited the Nigerian Maritime Administration and Safety Agency (NIMASA) for official purposes, while the second was an online questionnaire administered in Google Forms and distributed via the social media platforms used

by Nigerian seafarers' in the Lagos state government. This method was selected to obtain a prompt and direct response from a diverse and inclusive sample of the seafaring workforce in Nigeria (Glasow, 2005).

The questionnaire was divided into three parts. The first part elicited sociodemographic information of the seafarer respondents; the second part concerned the role of maritime education and training to address the mental health and wellbeing of seafarers; while the third part was about the kind of support system that seafarers received while on board ship. The interview was divided into two parts: the first part contained four questions, including the profile of the respondent and their general knowledge on Nigerian seafarers' mental health and well-being; the second part consisted of four questions related to the role of MET institutions in addressing seafarers' mental health and wellbeing in Nigeria.

The data collected from the Google Forms survey questionnaires were analysed using Microsoft Excel for quantitative analysis, while the interview

recordings were transcribed using the open-source software TurboScribe.ai and Otter.ai. Subsequently, the transcribed interviews were imported into Nvivo 14 coding software for qualitative analysis. The data was coded and classified into themes and subthemes according to the research question to uncover recurring patterns and distinctive observations related to the role of maritime education, mental health and wellbeing difficulties and support systems.

IV RESULTS

Results of the survey questionnaire

Demographic profile of participants

In total, 80 seafarers responded to the survey. Their gender, age group and years of experience as seafarers are presented in Table 1. The majority of the respondents (85 per cent) were males between the ages of 25 and 44, with seafaring experience ranging from less than one year (10 per cent) to more than 10 years (22.5 per cent).

Table 1: Demographic profile of respondents (seafarers)

Demographic Profile	Category	%
Gender	Male	85%
	Female	15%
	Prefer not to say	0%
Age (years)	18–24	5%
	25–34	38.75%
	35–44	46.25%
	45–55 and above	7.5%
		2.5%
Years of experience	Less than 1 year	10%
	1–3 years	22.5%
	4–6 years	27.5%
	7–10 years	17.5%
	More than 10 years	22.5%

Closed-ended responses from the seafarers

The closed-ended questions sought to identify the role currently played by Nigerian MET institutions in addressing mental health challenges faced by seafarers and to identify gaps and opportunities. With regard to the current status of mental health training for seafarers, 77.5 per cent of respondents reported having received some form of training on mental health and wellbeing from Nigerian MET institutions during their initial seafarer training. When asked whether the mental health training they received equipped them to cope with challenges they faced on board, 76.25 per cent either strongly agreed or agreed that it did. Concerning refresher or on-going training, 21.5 per cent of the participant seafarers reported receiving such training on an annual basis from a MET institution, while 18.5 per cent responded that they receive training every two to three years. In contrast, a significant portion of participants (35 per cent) reported that they rarely receive refresher training from MET institutions, while a further 22.5 per cent reported never having received refresher training. Finally, participants were asked to rate their satisfaction with the resources available to support their mental health. In response, 37.5 per cent of the participants were dissatisfied, 31 per cent were neutral, 18.75 per cent were satisfied and 12.75 per cent were very satisfied with the support they received in respect of the issue of mental health while at sea.

Open-ended responses from the seafarers

The open-ended questions were designed to capture seafarers' comprehensive views, experiences and opinions with respect to the role played by MET institutions in addressing mental health challenges. Participants' views on the role of training in providing the essential knowledge, skills and resources required by seafarers to cope with work-related factors that place strain on their mental health were elicited.

- **Role of MET in addressing seafarers' mental health:** Out of the 80 responses, the majority of the participants (46.5 per cent) highlighted the role of MET in addressing mental health challenges and identified several important areas that need attention, like integrating comprehensive mental health awareness and support programmes into

the curriculum, particularly in areas such as 'recognising mental health issues', 'resilience building' and providing dedicated courses on 'stress management'. Regular seminars, refresher training and continuous awareness initiatives were frequently recommended forms of training to address these areas. Secondly, 33.5 per cent of participants revealed the importance of communication skills, access to mental health, crisis intervention and fostering a supportive culture that prioritises mental health, alongside technical skills. Lastly, 20 per cent of respondents believe that MET can implement practical measures to support seafarers' mental health by encouraging a spirit of camaraderie and discouraging bullying within the institutions, and by creating awareness campaigns, easy access to information and professional counselling.

- **Important topics for mental health training for seafarers:** Out of the 80 responses regarding particular topics in mental health and wellbeing training, half of the participants revealed several important areas on which MET can focus, including depression and anxiety disorders and their management. Forty per cent of participants highlighted the significance of isolation and loneliness, especially in specific areas such as 'coping with isolation and loneliness' and 'how to cope with loneliness, and being away from family'. Another key area of focus was on stress management, as highlighted by 29 per cent of participants, who mentioned factors such as 'managing stress at sea' and 'anxiety management'. A further 18 per cent of the participants mentioned the importance of learning to maintain a healthy work-life balance, especially in areas such as 'managing family and work onboard', 'work-life balance' and 'balancing work and family obligations'. Lastly, 13 per cent of the participants mentioned physical health and fitness as another important subject, with responses including 'physical therapy', 'exercise' and 'gymnastics and physical therapy'.
- **Additional mental health and wellbeing training:** Out of the 80 responses concerning additional mental health and wellbeing training that they would like to receive from MET

institutions, a significant number of participants (38.5 per cent) said that there is a need for training related to stress management, with specific mentions of 'how to deal with stress', 'stress management techniques' and 'stress management training'. Additionally, 33 per cent of the participants mentioned managing anxiety and depression, specifically 'coping with anxiety and depression' and 'anti-depression courses'. Furthermore, 18.5 per cent of the participants emphasised the need for practical mental health support mechanisms like 'regular one-on-one sessions with a therapist' and belief that understanding psychology and human behaviour, like 'psychological training' and 'advanced human management training', are also important. Lastly, 10 per cent of the participants focused on addressing specific challenges faced by female seafarers, especially with respect to 'gender discrimination in the workplace' and 'how to work safely among men'.

- **Importance of awareness raising by the maritime industry in Nigeria:** With regard to raising awareness through education, 47 per cent of the participants emphasised the importance of making mental health courses a compulsory part of the curriculum in MET institutions and ensuring these courses are incorporated into the required training for seafarers, indicating that organising seminars and sensitisation workshops for stakeholders, and engaging MET institutions and unions are essential steps. Also frequently mentioned (33 per cent) was media channels, such as news outlets, social media and awareness posters on ships, as ways to help disseminate information widely and effectively. Lastly, 20 per cent of participants mentioned the importance of creating an enabling environment where seafarers can openly discuss their mental health without fear of discrimination. Also highlighted were motivating open conversation while on board, establishing confidential reporting systems, collaboration with mental health organisation, and engaging leadership in advocating mental health awareness.

Results of the interviews

In addition to input from seafarers, the research sought to obtain the perspectives of Nigerian MET institutions on their role in addressing mental health challenges of seafarers. The results from this data collection represent the perspectives of six different instructors from two Nigerian MET institutions.

The results from two participants indicate that the provision of seminars, sensitisation and awareness are important roles that MET institutions can play in addressing the mental health challenges faced by Nigerian seafarers. Pertaining to this, one of the participants highlighted the importance of 'educating seafarers about their rights and job expectations and ensuring they have a clear understanding of their roles and responsibilities'. The second participant emphasised the need for MET institutions to educate seafarers about substance abuse prevention in tackling mental health challenges and the importance of 'discouraging the use of harmful substances that can negatively affect seafarer's mental health and addressing misconceptions about substances that are thought to provide relief'. Another two participants highlighted counselling and orientation as an additional role. In this regard, one participant recommended that 'MET must provide counselling, seminars, and orientation to address seafarers' mental health and substance abuse issues'. One of the participants highlighted mental health support as the key role that MET institutions should play in addressing mental health challenges faced by seafarers in Nigeria. Another participant mentioned that 'implementing inclusive support mechanisms to help seafarers manage their mental health, maintain personal hygiene, and ensure good health and providing training and education while on board is important'.

V DISCUSSION OF RESULTS

The survey and interview results show the vital role that MET institutes could play in improving seafarers' mental health and wellbeing. The majority of the participants in both data sets suggested integrating mental health education into curricula, creating

a supportive and resilient culture, and providing mental health resources. The following recommended initiatives could be taken into consideration by Nigerian MET institutions to ensure a proactive approach to seafarers' mental health.

Seminars, refresher training and continuous awareness

More than half of the participants in the survey highlighted the importance of frequent lectures, refresher training and awareness initiatives, which is supported in the literature review (eg Shah, Andrioti & Jensen, 2018). These activities would ensure that seafarers receive mental health support and education throughout their careers, not only during training. Regular training could raise seafarers' awareness of mental health issues, and provide them with new coping skills and accessible resources, keeping mental health a top focus.

Fostering a culture of support and camaraderie

Many survey respondents stressed the importance of creating a supportive environment in MET institutions that prioritises mental health. Establishing a culture of support means creating an environment where seafarers can discuss their mental health issues without fear of repercussions. Organisational camaraderie and bullying prevention programmes could also foster this culture of support.

Communication skills, crisis intervention and counselling

In this study, the participants stressed the importance of MET institutions in promoting communication, crisis intervention, professional counselling, resilience and stress management. In a high-pressure environment, seafarers need to engage in precise communication for operational performance and mental wellbeing. Seafarers should develop their communication skills in MET institutions so that they may better express their emotions and seek help when needed. Secondly, crisis intervention training would help seafarers deal with mental health issues. This may include learning to

recognise mental distress and the provision of urgent or referral assistance. Thirdly, the participants also stressed the importance of professional counselling services at MET institutions. MET institutions can ensure that seafarers address their mental health difficulties in a confidential and supportive environment by providing easy access to skilled mental health counsellors.

Awareness campaigns

More than half of the participants in this study noted that MET institutions need to raise awareness of mental health by offering programmes that teach seafarers about mental health symptoms, their options and the importance of seeking help quickly, as supported by previous research (eg Lefkowitz & Slade, 2019). Participating in and supporting regular awareness campaigns could help to ensure that mental health remains a visible and prioritised issue within the maritime community.

Practical measures for mental health support

The survey results suggest that MET institutions use tangible techniques to improve seafarers' mental health. These initiatives include making mental health resources easily accessible, encouraging professional counselling and balancing mental health competences with technical skills. MET institutions could foster a supportive environment that actively rejects bullying and harassment. In addition, MET institutions could future influence seafarers' mental health attitudes and promote a healthier maritime culture by promoting positive behaviour and providing resources that support mental wellbeing, as supported in previous research (eg Shah, Andrioti & Jensen, 2018).

Curriculum integration of mental health education

Half of the survey participants highlighted the need for MET institutions to incorporate mental health awareness and support programmes into their curricula. Participants suggested that mental health education should integrate practical skills, including recognising the signs of mental health issues, building

resilience and managing stress. Stress management courses could help future seafarers' better deal with the psychological obstacles of living and working at sea (Brooks & Greenberg, 2022).

In addition, interview participants emphasised the importance of awareness of mental health education and sensitivity. In seafarers' training, mental health education could encourage open discussions about mental health and teach seafarers how to deal with their job's unique pressures. MET institutions could ensure that seafarers are able identify and manage mental health issues by adding mental health education to their curricula. This will reduce the stigma of asking for help and foster a supportive environment.

VI CONCLUSION

The key findings of this research from both the analysis of the survey and interview results provide a thorough understanding of the mental health challenges faced by Nigerian seafarers, and the role that MET institutions could play in overcoming these challenges. The results indicate that various factors, such as anxiety, depression, family disconnections, isolation and stress, contribute to the mental health issues that Nigerian seafarers face. These challenges are exacerbated by demanding work, substance addiction and limited mental health support.

On the other hand, the findings identified key steps that could be taken to address these issues, including implementing compulsory mental health training, integrating mental health education into seafarer training curricula, providing continuous awareness and refresher courses, and by introducing private counselling services. Finally, the findings suggest that addressing the mental health and wellbeing issues faced by seafarers requires a holistic approach that involves education, awareness and support measures; access to health care services; and cultural transformation within maritime institutions. It is hoped that the recommendations emerging from the research findings will be useful in developing a supportive environment for seafarers within the Nigerian maritime sector.

REFERENCES

Books, Chapters, Journal Articles, Conference Proceedings and Theses/Dissertations

- Abila, SS 'Minding the gap: Mental health education and standards of seafarer education' in N Senbursa (ed) *Handbook of Research on the Future of the Maritime Industry* (Hershey, IGI Global 2022) 69–90 DOI: 10.4018/978-1-7998-9039-3.ch004.
- Ajayi, FA and Udeh, CA 'Review of crew resilience and mental health practices in the marine industry: Pathways to improvement' *Magna Scientia Advanced Biology and Pharmacy*, (2024) 11(2) 33–49 DOI: 10.30574/msabp.2024.11.2.0021.
- Brooks, SK and Greenberg, N 'Mental health and wellbeing of seafaring personnel during COVID-19: Scoping review' *Journal of Occupational Health* (2022) 64(1) DOI: 10.1002/1348-9585.12361.
- Carrera-Arce, M, Bartusevičienė, I and Divari, P 'Healthy workplace onboard: Insights gained from the COVID-19 impact on mental health and wellbeing of seafarers' *Work* 73(1) (2022) 1–12 DOI: 10.3233/wor-210791.
- Doyle, N, MacLachlan, M, Fraser, A, Stilz, R, Lismont, K, Cox, H and McVeigh, J 'Resilience and wellbeing amongst seafarers: cross-sectional study of crew across 51 ships' *International Archives of Occupational and Environmental Health* (2016) 89 199–209 DOI: 10.1007/s00420-015-1063-9.
- Famous, O, Efe SI, Tsaro, KMB and Adekunle, O 'Social and economic wellbeing of seafarers across coastal Nigeria amidst Corona virus disease' *Heliyon* (2023) 9(8) e18275–e18275 DOI: 10.1016/j.heliyon.2023.e18275.
- Glasow, PA *Fundamentals of Survey Research Methodology* (McLean, MITRE 2005).
- Hystad, SW and Eid, J 'Sleep and fatigue among seafarers: The role of environmental stressors, duration at sea and psychological capital' *Safety and Health at Work* (2016) 7(4) 363–371 DOI: 10.1016/j.shaw.2016.05.006.
- Li, X, Zhou, Y and Yuen, KF 'A systematic review on seafarer health: Conditions, antecedents and interventions' *Transport Policy* (2022) 122 11–25 DOI: 10.1016/j.tranpol.2022.04.010.

- Mansyur, M, Sagitasari, R, Wangge, G, Sulistomo, AB and Kekalih, A 'Long working hours, poor sleep quality, and work-family conflict: determinant factors of fatigue among Indonesian tugboat crewmembers' *BMC Public Health* (2021) 21(1) DOI: 10.1186/s12889-021-11883-6.
- Nittari, G, Gibelli, F, Bailo, P, Sirignano, A and Ricci, G 'Factors affecting mental health of seafarers on board merchant ships: a systematic review' *Reviews on Environmental Health* (2022) 39(1) DOI: 10.1515/reveh-2021-0070.
- Ogbodum, MU, Ogunkola, IO, Adetola, AA, Befrits, AE, Madu, GO and Lucero-Prisno, DE 'Mental health of seafarers amidst pandemics' *International Maritime Health* (2022) 73(4) 223–224 DOI: 10.5603/imh.2022.0037.
- Okeleke, UJ and Aponjolosun, MO 'A study on the effects of COVID-19 pandemic on Nigerian seafarers' *Journal of Sustainable Development of Transport and Logistics* (2020) 5(2) 135–142 DOI: 10.14254/jsdtl.2020.5-2.12.
- Oldenburg, M and Jensen, H-J 'Stress and strain among merchant seafarers differs across the three voyage episodes of port stay, river passage and sea passage' *PLOS ONE* (2019) 14(6) e0217904 DOI: 10.1371/journal.pone.0217904.
- Radic, A, Lück, M, Ariza-Montes, A and Han, H 'Fear and trembling of cruise ship employees: Psychological effects of the COVID-19 pandemic' *International Journal of Environmental Research and Public Health* (2020) 17(18) 6741 DOI: 10.3390/ijerph17186741.
- Shah, B, Andrioti, D and Jensen, OC 'Training needs among maritime professionals: a cross sectional study' *International Maritime Health* (2018) 69(2) 129–136 DOI: 10.5603/imh.2018.0019.

Websites, Articles and Industry Reports

- Lefkowitz, RY and Slade, MD *Seafarer Mental Health Study*. Final report. (London, ITF Seafarers' Trust 2019) (available from: <<https://www.seafarerstrust.org/publications/seafarer-mental-health-study-lefkowitz-slade-yale>>).
- Saksela-Bergholm, S and Arasanz, J 'The inspectorate network of the international transport workers

federation: A comparison of a transnational union enforcement action in Finland, Poland and Spain' SPLIN Synthesis Report (FORBA 2020).

UNCTAD *United Nations bodies call for further action to end seafarer crisis* (Geneva, UNCTAD 2022) (available from: <<https://unctad.org/news/united-nations-bodies-call-further-action-end-seafarer-crisis>>).

World Health Organization *Mental Health* (Geneva, WHO 2022) (available from: <<https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>>).

Sampson, H and Ellis, N 'Seafarers' mental health and wellbeing' (Cardiff, IOSH 2019) (available from: <<https://orca.cardiff.ac.uk/id/eprint/127214/1/seafarers-mental-health-wellbeing-full-report.pdf>>).

Government Publications

Andrei, D, Grech, M, Crous, R, Ho, J, McIlroy, T, Griffin, M and Neal, A 'Assessing the determinants and consequences of safety culture in the maritime industry' (Canberra, Australian Maritime Safety Authority 2020) (available from: <<https://www.amsa.gov.au/sites/default/files/assessing-the-determinants-consequences-of-safety-culture-in-maritime-ind.pdf>>).



MM Gaddafi



A Pazaver



I Bartusevičienė