

Seafarers' well-being in the context of the COVID-19 pandemic: A qualitative study

Ana Slišković

*Department of Psychology, University of Zadar, Obala kralja Petra Krešimira IV, 2, 23 000 Zadar, Croatia
Tel.: +385959002159; E-mails: aslavic@unizd.hr, asliskovic72@gmail.com*

Received 25 May 2020

Accepted 25 September 2020

Abstract.

BACKGROUND: The public health strategies for prevention of SARS-CoV-2 infection have included closing the national borders and cancelling international flights, which has severely affected free crew changes. This caused prolonged stay on board or at home for seafarers, who should be recognized as 'key' workers regarding their essential role in maintaining the flow of vital goods.

OBJECTIVE: Using a general inductive approach, this qualitative study aims to describe *how* the COVID-19 pandemic reflects on seafarers' well-being. The study focused on obtaining personal experiences from seafarers on board, and seafarers at home, relating to the current world pandemic.

METHODS: A convenience sample consisting of 752 seafarers from the international seafarers' population participated in an online study in spring 2020. The questionnaire used included questions relating to basic sociodemographic and work characteristics, and one open question which addressed seafarers' personal experiences. The data obtained was analysed by thematic analysis.

RESULTS: The emerged themes included *mental, physical, social and economic well-being*. Most of the answers of seafarers located on board related to threatened mental, physical and social well-being, while seafarers at home reported mostly on threats to their economic well-being.

CONCLUSIONS: Seafarers' well-being is seriously threatened by preventive measures relating to the COVID-19 pandemic. Results are discussed in relation to earlier findings in the area of occupational stress in seafaring. Overall, the data obtained portrays existing underlying occupational structures in the seafaring sector, which are rendered more visible due to the COVID-19 pandemic. In short, seafarers describe their reality as far away from the concept of 'key' or 'essential' workers.

Keywords: Qualitative descriptive study, mental, physical, social and economic well-being, occupational stress, seafaring

1. Introduction

Since maritime transport carries around 90% of the world trade, seafarers are providers of essential services that are key for the maintaining the flow of vital goods, such as food, fuels, and medical supplies. However, the public health strategies for prevention COVID-19, primarily restrictions such as closing national borders and cancelling international flights, have severely affected free crew changes, i.e. sign-on

and -off from ships. In view of this, the International Maritime Organization (IMO), in cooperation with a broad section of relevant maritime-transport associations, has made multiple calls for establishing seafarers as 'key workers', which would exempt them from travel restrictions and allow crew changes [1]. In spite of this, many seafarers all around the world are still faced with uncertainty about their future, i.e. further contract extensions or impossibility of signing on. This situation has imposed itself

as an additional threat to seafarers and the maritime sector. The seafaring profession is already recognised in the literature as highly demanding, hazardous and stressful [2], with a range of possible negative effects on safety [3–5], physical health [6–10] and mental health [11–13]. According to a review of occupational sources of stress in seafaring [2], seafarers face many stressors, among which the most often cited include long-term separation from home and family, and fatigue which occurs as a consequence of high work demands, i.e. high workload and long working hours. Work and life in an isolated work environment brings additional stressors, such as environmental stressors on board (e.g. poor weather, noise, vibration), deprivation of physical and psychosocial needs (e.g. limited influence on quantity and quality of food, limited opportunities for physical recreation and social life, lack of or limitations on internet access), and interpersonal relations. Interpersonal relations represent a challenge in all work environments; however, considering the multicultural and hierarchical structure of the seafaring sector, and the confined work environment, unfavourable relations may pose themselves as a specific stressor on board [2]. The links between stressors in seafaring and negative long-term effects of stress on health and well-being in seafarers (e.g. higher morbidity and mortality due to cardiovascular diseases [7], higher number of suicides in comparison to the general population [12]), may be explained partly by individual characteristics, such as personality traits, strategies of coping with stress, and (un)healthy lifestyle factors [2, 10].

However, previous studies have indicated unfavourable working conditions in the seafaring sector as significant antecedents of occupational stress and negative effects on well-being, health, safety and performance. Overall well-being of seafarers is influenced largely by changes in organisational structures in the maritime industry, such as globalisation, technological improvements which increase job complexity, reduction in crew numbers, and short-term contracting, which increase job insecurity, multicultural crewing, and ships operating under flags of convenience [14]. Previous studies have shown that various characteristics of work contracts (duration of on-board stay, (un)favourability of ratio between on-board and off-board periods, and (non-)respect for contracted periods) contribute to the explanation of seafarers' well-being [15, 16]. Therefore, the continuance of work after the end of the work contract, and uncertainty about the leave date, contribute to fatigue

and stress and may affect ability to perform safe ship operations. On the other hand, since precarious employment is very common in the maritime industry [17], job insecurity represents a serious source of stress among seafarers [2]. Therefore, prolonged stay at home may be a serious threat to seafarers who do not have permanent contracts, and those who get income only during working periods.

In view of the organisational structures in the maritime industry and previous knowledge in this area, the well-being of seafarers during COVID-19 restrictions to free crew changes imposes itself as an important research topic. This study aims to describe *how* the COVID-19 pandemic reflects on the well-being of seafarers on board and at home, using their personal experiences as the basic source of data. Although the study as performed has a noted broad, strong theoretical background, due to the novelty of the research topic, the methodological approach of this study was qualitative, i.e. exploratory and inductive [18–20], without setting explicit prior hypotheses, and without addressing a quantified generalisation of the results obtained. The research process was guided by the post-positivist paradigm, which assumes objective reality, but at the same time is concerned with the subjectivity of reality. In other words, this qualitative study used a general inductive approach to provide a detailed and in-depth description of seafarers' well-being in the context of COVID-19. The study was conducted online, as the online setting was evaluated as appropriate for responding to moments of global crisis, i.e. to reach a heterogeneous sample of seafarers willing to share their personal experiences.

2. Methods

2.1. Participants and procedure

This study is based on a qualitative online survey which included a non-random sample of seafarers from the global maritime market. The sample used may be classified as purposive, since the researcher sought only those seafarers who are willing to reflect on their experience regarding the research topic, and convenience, since it included a non-representative sample of participants who meet practical criteria (e.g. easy accessibility, geographic proximity, availability at a given time, or the willingness to participate) [21]. The sampling was based on the help of many national and international maritime

organisations, unions, associations and groups who shared the call for participation in the study on their social-media websites. Additionally, a snowball strategy of sampling was used, as willing participants also shared the call for participation in the study among their colleagues. The sampling procedure described, as well as the study design, gave confidence in anonymity for participants, since they perceived that their participation in the study was in no way related to the company that employed them.

The total sample consisted of 752 seafarers employed in the shipping sector. At the time of participation in the study, 55.11% of participants were located at home, while 39.90% were working on a ship. The rest of the sample (4.99%) reported other non-home land locations. The majority of the participants were male (89.23% male and 10.77% female seafarers). The age of the participants ranged from 19 to 76 years ($M = 37.34$, $SD = 10.37$), while the average length of service in the shipping sector was 14.10 years ($SD = 10.13$). By nationality, the greatest number of participants in the sample were Croatian (27.53%). They were followed by seafarers from Turkey (8.78%), the Philippines (7.71%), Ukraine (5.59%), Romania (5.05%), the United Kingdom (4.52), India (4.12%), Latvia (3.39%), Russia (3.46%), the Republic of Ireland (3.32%), Germany (2.52%), the Netherlands (2.66%), the United States of America (2.13%), Montenegro (1.76%), Sweden (1.73%), Oman (1.60%), and Bulgaria (1.20%). The rest of the sample consisted of seafarers from a range of countries (Malaysia, Norway, Greece, Lithuania, Italy, Egypt, Brazil, Belgium, South Africa, Poland, Indonesia, Algeria, Georgia, Spain, Bangladesh, Finland, Nigeria, France, Venezuela, Malta, Nepal, Serbia, Slovenia, Ghana, Canada, Pakistan, Australia, Lebanon, Bosnia and Herzegovina, Albania, Colombia, Morocco, Senegal, Chile, the Seychelles, Luxembourg, Syria, New Zealand, Tanzania and Portugal). The percentages of participants from each of these countries were below 1%. Regarding type of ship, the largest number of participants worked on cargo ships (66.85%), such as oil and oil-product tankers, LNG and LPG ships, chemicals, containers, general cargo ships etc. Seafarers who worked on passenger ships (e.g. cruise ships, ferries and yachts) constituted 16.11% of the sample. The rest of the sample participants (17.04%) reported working on special-purpose ships and/or in other types of maritime jobs (e.g. dredgers, research ships, tugs, suppliers, support vessels, pilot vessels, rescue ships, training ships, FSO vessels, and

offshore platforms). The majority of the participants (90.43%) worked in international shipping, while the rest of the sample reported working in domestic/national shipping. The sample mostly included seafarers from the higher ranks. More precisely, the largest number of participants by rank were deck officers (39.93%), followed by masters/captains (16.49%), engine officers (10.37%), chief engineers (7.85%), and electro-technical officers (5.59%). The rest of the sample consisted of cadets in the Deck and Engine department (6.38%), members of the deck crew (5.19%), members of the engine crew (1.99%), members of the Steward Department (1.73%) and others. The sample was heterogeneous with regard to the reports on contracted patterns of on-board and off-board shift change, as patterns of shift change depend on various characteristics (type of the ship and shipping field, maritime company policy, work positions, country of citizenship, etc.). Patterns of shifts varied from shorter equal periods of less than one month (e.g. 15 days on-off), through medium equal periods (e.g. 3 months on-off) and medium non-equal periods (e.g. 4 months on, 2 months off), to longer periods with equal duration (e.g. 6 months on-off) and non-equal (e.g. 8 months on followed by 2 or 4 months off). More than half of the participants were married (59.44%), followed by participants who reported single status (23.54%), and those living in domestic partnership (13.30%). The rest of the sample included seafarers who were divorced (2.39%), separated (0.93%) and widowed (0.39%). Of the participants, 59.97% reported having children.

The non-probabilistic sampling procedure used does not allow the giving of data on response rate. Furthermore, the sample of seafarers used differs from the target population of seafarers in the global maritime market [22] with regard to basic characteristics such as country of citizenship and work position. However, considering the qualitative methodological approach used, which does not aim at quantifying the reports obtained and generalising at population level, the heterogeneity obtained among the sample participants allows fulfilment of the research aim: to describe experiences regarding the research topic from the perspectives of a heterogeneous sample of seafarers. In addition, it should be emphasised that the final sample size was related to the saturation point and theoretical validity of the data. The author analysed the collected data simultaneously with the data collection, and stopped sampling at the point where no new themes were identified (saturation), and when

it was ensured that the emerged theoretical patterns did not change in time (theoretical validity).

Data was collected via online questionnaire from 5th of April to 14th of May 2020. Ethical approval had previously been granted by the Ethics Board of the Department of Psychology, University of Zadar. Participation in the study was voluntary, and participants were informed about all the important aspects of the study in the call for participation in the study. Anonymity of participants, as well as confidentiality of data, was guaranteed. The contact details of the researcher were provided to ensure that participants had the opportunity for questions, comments and/or requests for feedback relating to the results of the study. The participants perceived the researcher as a neutral scientist with previous experience in the area of maritime psychology. Reflexivity was maintained through the whole research process; i.e. the author considered the possible effects of her personal characteristics, previous experience in research among seafarers, and epistemological perspective on study design, data collection and data analysis. The researcher's interest in seafarers' well-being at a moment of global crisis was regarded as important for getting honest, deep and detailed data, suitable for a qualitative approach.

2.2. Materials

The first part of the questionnaire, designed in *Google Docs*, contained sociodemographic and work-related questions, while the second part contained one question relating to the research topic of this study.

The questions in the first part included data on gender, age, country of citizenship, length of service in the maritime sector, marital status, having children, and current location. Further work-related questions included work position, type of ship, shipping field (national or international shipping), and contracted pattern of on-board and off-board shift change. Depending on the current location (ship or home), participants answered these work-related questions with regard to their current or previous work contract.

The key question "*How does the COVID 19 pandemic affect you personally?*" was designed as an open question. The participants were informed that the researcher was seeking deep, detailed descriptions of the effects of this situation on seafarers, and that they were free to use their own words when answering this question. However, several sub-questions that

may have helped in creating the answer to the key question were offered. The sub-questions included: "To what extent has this situation prolonged your stay on board or at home? How does this situation affect you? How do you feel regarding this situation? How does this situation affect your well-being, your health (including your physical state and your mental and emotional state), your work motivation and work productivity, your financial situation, your family and social life, relations with important others, your attitudes towards life, towards your job, your life values, your beliefs, etc.?" Although these sub-questions were offered as help, the participants' task was to give an answer only to the key question, and it was emphasised to them that all answers relating to their personal experiences of the current pandemic situation were welcome.

2.3. Data processing and data analysis

The data obtained was exported into an Excel table in which each participant had a code number.

Statistical parameters (M, SD and %) were used only for describing the sample in terms of relevant sociodemographic and work characteristics.

The reports generated in relation to the key open question satisfied the criteria for a qualitative approach, as they were collected in natural situations, collected via a non-structured research technique, and not reduced in any way prior to analysis, and they ensured deep insight into the participants' experiences and reflections relating to the research topic [18, 19]. The reports were transported to a Word document and analysed using *thematic analysis* [23]; the steps in the analysis consisted of familiarizing with the data, generation of initial codes, and analysis of relevant themes (searching, reviewing, defining and labelling themes). Analysis was conducted manually in an electronic document, without use of any specialised software. Initial codes and themes, as well as author's notes relevant for further analysis (reflections, observed links, and early interpretations), were recorded in the form of comments in the document. Finally, different colouring was used for identifying participants' reports (or parts of reports) that related to the specific themes.

The author used an inductive approach in the analysis, since the study aimed to develop themes from the data, with no external influences. The emerged themes were validated through an iterative process of reading the original data, the author's analysis of relevant themes, and re-reading the original data. The

author seriously considered her reflexivity in this process to ensure that the themes *emerged* from the data. Additionally, as a test of 'goodness of fit' between data and themes, a 'search for deviant cases' that did not fit the themes was used. Although member checking with participants was not used, due to the issue of anonymity, it is safe to note that the results have a high level of participants' validity, as the themes identified closely reflect the original data (See examples in Tables 1 and 2).

3. Results

Almost all participants reported on an extension to their stay on board or at home, while a minority reported expectation of an extension to occur in the near future. Although some participants reported direct effects of the COVID-19 pandemic on their health or the health of their families (being infected or being in quarantine because of suspicion of infection), and/or their general opinions regarding the world pandemic, most of the answers were based primarily on participants' description of their well-being in the context of a prolonged period on board or at home due to the world pandemic. Thematic analysis of participants' answers to the key question of this study has shown four main themes: *mental, physical, social* and *economic well-being* (Tables 1 and 2). These themes emerged in both subsamples: seafarers who were currently on board and those at home gave their reflections on the current pandemic situation in terms of the well-being dimensions noted. However, analysis has also indicated noticeable differences between the *two subsamples with regard to the content within the main themes, as well as regarding the relative relevance of the specific theme*.

Before the description of the answers within the specific themes it should be emphasised that, in accordance with the aim and the methodological approach of the study, the answers were not quantified. The goal of this analysis was not to quantify how many respondents share certain experiences, but to offer a description of their different experiences. However, it should be said that, in spite of the fact that analysis shows a range of different experiences (from reports that this situation does not "affect them at all", through reports of moderate or mild effects, to reports of extreme negative effects of the world pandemic on their well-being), the majority of the participants reported some negative experiences. In addition, the reader should be aware that the terms "effect" and "consequence" in the Results section is used from the

participants' perspective, as they described *how* the world pandemic reflects on them personally. These terms do not allude to any attempt by the author to draw causal conclusions of effect of COVID-19 on well-being.

3.1. Seafarers on board

Seafarers who were currently on board reported mostly on their *mental and physical well-being* in the context of their prolonged stay on the ship. Although mental and physical well-being represents distinct concepts, it may be seen from the examples (Table 1) that seafarers reported on them mostly as common consequences, since fatigue and uncertainty related to the current situation, according to their reports, affected both their mental and physical states. However, it might be said that the dominant answers within this theme related more to a detailed description of mental well-being (e.g. negative emotions, moods and feelings, unfavourable cognitive evaluations of the current life as a seafarer), in which some participants reported seriously disrupted mental health (e.g. suicidal thoughts). As shown in Table 1, participants referred to their mental state in terms of mental tiredness, worry, anxiety, nervousness, stress, sadness and depression. On the other hand, physical state was mostly referred to in terms of fatigue resulting from a prolonged working period and high workload, the effect of a psychological state caused by stress on physical status (e.g. medical issues resulting from anxiety, sleep disturbance, etc.), and fear of possible infection with coronavirus resulting from not respecting the vessel as an isolated environment. Still, fear of infection depends on protective measures on board, and some participants reported that they felt safer being on board at the moment in comparison with being home. Furthermore, although seafarers' reports on work motivation, engagement and efficiency varied across the sample, with some participants reporting that they still do their best in spite of the situation, the majority expressed a negative influence of their current mental and physical state on their motivation to work. As can be seen from examples in Table 1, their mental and physical fatigue, as well as unfavourable emotional state, in some cases led to an extreme inability to concentrate and engage in work tasks (e.g. "... Completely exhausted. No wish to work. Feeling of indifference about my duties and responsibilities. Feeling indifference about the ship..."), which represents a serious threat to on-board safety.

Table 1
Well-being of seafarers *on board*: examples of original data reports

Mental and physical well-being

- "We are already tired and our body and mind has reached its limits but the shipping company doesn't understand us. We are not safe here in the vessel, since authorities, pilots, stevedores, and etc. is coming onboard the vessel..."
- "... I'm already sixth month on a board, with winter trading of the vessel to Iceland through the stormy weather my forces and willingness to be ready to keep the duties are reducing every hour and every day. If the situation with crew rotation will not come effective very soon, only God knows what can be happened due to fatigue of mind, body, soul..."
- "Personally, I like to look at the positives. The more time spent on the vessel the more I make. However, my case differs from others in the fact that I am single and have no children. The other aspect is that most people in the industry are not working 75 on/off. They are work 4 months or longer. So the fact I may be extended 2-3 months does not impact me as much as it would someone who had already been on the vessel for 4 months."
- "This pandemic has affected me a lot! Specifically the fact that there are no crew changes planned! Loss of motivation, loss of work productivity. Constantly depressed. Very bad emotional state. Can't sleep. Horrible state of mind during navigation watch and cargo operations, loss of concentration as a result."
- "I want to go home, my contract already finished, and I am tired physically and mentally! And no information up on now about crew change, and how long we will stay on board more, 1, 2, 3 months! And every next day emotional state become worst!"
- "Completely exhausted. No wish to work. Feeling of indifference about my duties and responsibilities. Feeling indifference about the ship. Feeling loss of controlling your life. Feeling sadness."
- "Not knowing when I will go back to work has increased my anxiety level, causing me medical issues. The sooner countries will designate seafarers as essential key workers, the sooner things will get better for us."
- "... Non availability of shore leave for long time is seriously affecting the mental health of my crew and rising serious concerns, especially in such situations when member of crew have some health problems and need to visit a doctor, but this is not allowed by local authorities due to quarantine restrictions."
- "I'm stressed and little depressed, my contract already finished. No crew change until end of May. I will survive, but it will leave consequences. Working hard every day, keeping watch in CCR and Bridge as well. No day off since beginning of December. I'm fed up and just want to reach home."
- "My company is requiring all officers to remain on board for a minimum of 105 days, which far exceeds our regular 75, which I had made plans for and scheduled out the remainder of my year accordingly. It is hard for us to get stores. I find it ridiculous that we are not allowed to do crew change "for our own safety" however, we are forced to do cargo operations and interact with shore personnel who have been exposed to the outside world and potentially are ill in order to make them money. Then it's totally fine. All in all myself and the entire crew is upset, and very angry. And above all, what it has really shown me is that the company and even our own unions could care less about us as people and only care about our earning potential for them. They'll lie straight to your face about it too. The entire process has been exhausting and very disappointing. Motivation is at low all-time, everyone feels as trapped as we are, and I've never wished I had a less "essential" job until now."
- "Sometimes I lost focus on my work. Some days I wake up very discouraged. I'm also afraid of losing my job. This totally takes away the concentration of work which can lead to accidents."
- "Crew replacements cancelled for an indefinite period after the end of the contract without further prospects put a heavy strain on the psyche. Work in the risk zone of infection, increased workload due to ports every day, frequent sleep breaks due to awakening to mooring lines, the employer's requirement to renew the contract and inaction of international organizations in protecting the rights of seafarers negatively affect the psyche. Uncontrolled outbreaks of aggression, hate, depression, compulsive disorders, disruptive disorders, sleep disturbance, sudden mood swings, desire to sabotage, desire to escape, hatred for all international organizations designed to protect the rights of sailors, hatred of their profession, aversion and complete unwillingness to return to work at sea, suicidal thoughts."
- "... We still do our job well despite of being tired. We love our job and this feeds our family so we are still doing our best. If we didn't do our job well, we are the one who's at risk. Our life depends on it..."

Social well-being

- "Not able to sign-off... sign-off was expected in March 1st week but now stocked. And at this moment my wife is alone struggling with virus and am not been able to help her... Please help us."
- "Not much yet just cannot leave the ship at all, that's quite annoying being locked in this kind a jail and being worried about family and friends at home."
- "Life on-board is almost same as before but the possibility to go ashore for a walk or run to refresh the Mind is gone. We are not allowed to go ashore. I feel bad because of Philippine crew are not allowed to go back home and they have now 8 month on board. It affects me in the way that I don't know of they will close the border and I have to stay on board or I can go home as planned. Only time will tell but it's frustration of not knowing."
- "Not much on 'bad mood', we are already used to isolation..."
- "We are in isolation at anchor and no one is allowed to sign on or off. We risk being thrown out of the country and all nearby is closed..."
- "Feel like in jail!"
- "Ratings are so far not scheduled for Crew change, which is very hard for them. Some will reach 1 year onboard in May."
- "Already I finished 4 month on board and no any hope of near future sign off. It is a very stressful situation affecting my physical and mental condition. I feel that I am abandoned by society, that I am good only like a slave but not as a part of human community. Is revolting what is happen with the seamen, regarding their place in human community. I am total disappointed of human behaviour. My beliefs in my position and my job and the place of each person in society and the duty of society to respect us are badly shaken. Hope for everybody to be a happy ending, but will be a bitter one."
- "They forgot us."

Economic well-being

- "I'm professional, my contract is expired and I was supposed to go home already but in this moment of COVID-19 madness I'm happy that I'm on board and have a privilege to earn money for my family when unfortunately lot of people around globe losing jobs."
- "We are all grateful to still be working and earning money in these uncertain times but everyone's hearts and heads are wishing they were at home with their families instead."
-

Table 2
Well-being of seafarers at home: examples of original data reports

Mental and physical well-being

"Still everything is OK, as I feel like it is not happening. But if this situation will be prolonged definitely will have impact on mental and emotional state. Cannot say how much time will have to pass, to start being under the influence . . . "

"Horrible/I'm isolated with family at home, exceed vacation with no payments/incomes. Afraid about future . . . "

"Uncertainties for the future in all aspects."

"Not sure about next assignment, difficult to plan anything in such uncertain situation, have to save money as not sure about nearest future . . . "

"We all stuck into our home and we stay at home to keep ourselves healthy. I cannot maintain my life like as normal."

Social well-being

" . . . Situation is very stressful as before you were in isolation on board and now you need to do isolation at home and again afterwards go on board for basically another isolation... Social life will be poor for whole year as you are in isolation. Hope this will end soon at least for us seafarers because traveling is our life."

"Time at home got me some more time to spend with family. But this type of living in quarantine makes me more uncomfortable because I used to live this way on board and not at home. And it will be a quite problem to get back on board from this kind of situation."

"Home isolation is nothing that affects me, after all I am at home with family."

Economic well-being

"This situation prolonged my stay at home already on month over my schedule. I feel frustrated, and already feeling depressed because my affected financial status. I know that if I were onboard right now would probably feel depressed or anxious, but with one mayor concern less - financial well-being of my family. I'm sole provider and being without any means to provide for family at this time leaves helpless and then frustrated, angry, anxious combined with only negative feelings rather than positive since I'm home with my loved ones."

"Personally I am good as I am already so long at sea, and with good income, so I can stay at home for a long period, but there are many seafarers in very bad situation, and unpredictable future. I am in connection with many of my colleagues, and honestly some of them already started to think about change of job for something on shore."

"For the moment this extension of stay at home don't affect me so much but if the situation like this continue it will be quite hard to fulfil 183 day rule for income tax exemption."

"It's really hard time for me. I was supposed to join my ship in Feb mid, because of COVID 19 it affects me really hard as I am out of cash and I have some debt, which I need to pay monthly. If it sustain for long period of time it will be really hard as I am pissed and frustrated because of this my personal life also get affected because of that. Hoping that situation will recover fast."

"Uncertain of what will happen with the cruise industry, my worries are that this may need a lot of time to recover and of course force me to find another type of employment."

"Not sure about job security, paying mortgage, unable to continue with chief mate's ticket in college until further notice."

"My financial situation with every day coming worth and worth. I have credit and my documents expired in end of November. If pandemic were not finished I will lost my documents and my position. Without my job, I can't renew my documents."

"If this would last for too long there is a possibility to lose my job, I will spend all my savings for my family, after that me and my family would face serious financial issues."

"Not able to join ship due to travel restrictions. Loss of financial support and having to pay income tax over that due to more time at home. Would prefer to be on ship during this time."

"Lost the job."

"No income."

"I have been appearing for my competency exams for the next rank since December but due to Covid-19, we are under a complete lockdown. Due to which the examinations have been suspended plus the crew change have been suspended too. It is affecting are day-to-day life to a great extent. Istly because we aren't paid while at home so we are just wasting our time unable to appear for examinations and also unable to join the ship. By the time this lockdown is lifted, we won't be in a situation to stay further to clear our examinations and will have to join at the earliest."

" . . . Company established 'minus day policy' so all of as at home will be with constant monthly income, but not know for future plans . . . "

The *social well-being* of seafarers whose working period on board has been prolonged past the work contract may simply be described as "feeling worse than in prison as they don't know the release date". Although seafarers are generally used to living and working in a socially isolated environment, the fact that the period of isolation is significantly prolonged to an uncertain date, alongside restrictions introduced regarding shore leave, has significantly affected their social well-being. Reports of loneliness and missing of their families are aggravated by fear for loved ones because of the world pandemic. Finally, social

welfare is severely undermined by the sense of isolation from the community and abandonment by formal organizations and associations in charge of caring for seafarers. Prolonged isolation and the experience of being "forgotten" contribute to the earlier-described effects on mental and physical plans.

The strongest picture of observed personal experiences of seafarers on board is the contrast between the key or essential role of the seafaring profession and the fact that they feel not like key workers, but like prisoners. Actually, the words "jail", "prison", and "trap" are very common in the descriptions of their

experience. The contrast noted may be seen from two citations below.

"I feel mentally tired, but mostly due to constantly thinking about when I will go home. Honestly, it is surprising how we are still not officially considered key workers worldwide. IMO should have the authority to force any country to let us travel freely, and not 'recommend it'. It is absurd how all the countries want to keep their benefits from shipping, but they don't like to offer anything in return. I still consider that I need to do my part in this crisis, but if let's say 30% of the seamen would just stop and boycott this, and goods and food wouldn't reach their destinations, then you would see a real crisis where people would start looting and fighting for food."

"... everyone feels as trapped as we are, and I've never wished I had a less 'essential' job until now."

Finally, the majority of participants located on board did not refer to their *economic well-being*, but descriptions given by those who referred to it were mostly favourable. Some of them reported feeling satisfied and privileged as they work normally and earn while many people all around the world lose their jobs as a consequence of the world pandemic.

3.2. Seafarers at home

Most reports by seafarers located at home at the moment of participation in the study related to *economic well-being* (Table 2). As can be seen from examples in Table 2, this subsample of participants reported mostly on financial worries, as their salary is often the greatest source of the family income. A prolonged period at home for a large proportion of participants means an absolute lack of income, as they are paid only during working periods, and/or they have no formal work contract at the moment. The short quote *"I don't know how to feed my family"* obtained from one of the respondents illustrates the helplessness of seafarers who are usually sole income providers in their families. Some of the participants reported losing their jobs because of this situation. The most endangered are seafarers in the passenger-shipping sector, who expressed a serious fear of whether and when the cruise industry would recover. For some of the participants this extended home period means extended holidays, as they are still paid. However, even they expressed worries, as

they are not sure how long that can last and how it will affect their further lives (as the company policy of 'minus-days' means that they will have prolonged working periods in future). Furthermore, a large proportion of participants are worried about paying large taxes at the end of the year, as their prolonged period at home will stop the usual tax exemption based on working days in international shipping. Finally, restrictive measures have also blocked attendance of university studies and other educational courses, i.e. getting and/or renewing various professional certificates upon which their ability to be employed and/or get promotion are based. Therefore, this aspect contributed to their negative feelings relating to future career and economic well-being.

In comparison to economic well-being, reports relating to mental, physical and social well-being were relatively underrepresented in the subsample of seafarers located at home. However, it is evident that *mental and physical well-being* of seafarers left at home may be seriously endangered by financial worries and uncertainty about the future. (See examples in Table 2.) Job uncertainty in the seafaring sector has imposed itself as a primary source of stress, which reflects on the well-being of whole families, and which has led to considering a change of job. With regard to *social well-being*, the reports obtained indicated two general patterns. Some of the participants experience restrictive measures regarding physical distance (orders or recommendation for isolation – 'stay at home' measures) less difficult, as they are finally spending a longer time with their families. On the other hand, isolated periods at home for some of them are additionally frustrating. They reported on the extreme stressfulness of this situation, as isolation at home has come after their isolated work period on board and will be followed by a working period in an isolated environment in the future.

4. Discussion

The aim of this study was to describe seafarers' well-being in the context of the COVID-19 pandemic. The personal experiences obtained show patterns according to which restrictive measures relating to the world pandemic reflect on the mental, physical, social and economic well-being of seafarers. Although the design of this qualitative study, conducted at one point in time, does not allow for any causal conclusion, the findings gathered, based on the personal perspectives of seafarers, show that the well-being

of seafarers may be seriously threatened by prolongation of duration of work and non-work periods. Seafarers' self-reports show that prolonged working periods in the isolated environment on board negatively reflect on their mental, physical and social well-being. Experiences of threatened *social well-being* among seafarers on board are based mostly on prolongation of work in an isolated environment and feelings of being "forgotten" and "abandoned" by the community, which contribute to unfavourable mental and emotional states. Reports on the *mental well-being* of seafarers on board mostly include experiences of negative cognitions, emotions, moods and feelings, which reflect both on their physical state and on their work motivation and engagement. Finally, they refer to *physical well-being* by describing short- and long-term bodily consequences of occupational stress. On the other hand, seafarers who, due to the world pandemic, have stayed for a prolonged period at home refer mostly to their *economic well-being*. The personal experiences obtained show how the restrictions imposed on signing on reflect on job insecurity, lack of income, and financial worries, which represent serious threats to the overall well-being of seafarers and their families.

However, regarding the results obtained, the methodological limitations of the study must be emphasised. Although non-random samples are common in qualitative studies, as they aim for deeper description, and not quantification, the reader needs to bear in mind that the non-representativeness of the sample does not allow the results obtained to be generalised to the overall population of seafarers. Differences in the obtained sample in relation to the target population might lead to over- or under-representation of emerged themes. Furthermore, common disadvantages related to the survey method in general (e.g. accessibility of survey to all members of target population, self-selection of the sample based on volunteers, honesty and introspective ability of participants), and online surveying (e.g. lack of researcher and possibility of fraudulent data) should be considered. Finally, the online setting used lacks personal proximity between researcher and participants, which is an important aspect of a qualitative approach. However, one should also bear in mind that seafarers are, in normal circumstances, regarded as a hard-to-reach population for research, and that online survey is the only method that could enable collection of data on this topic in the circumstances of the world pandemic. Therefore, the considerable size of the sample (N = 752) gives a validity to the analysis

presented. Furthermore, detailed, rich and in-depth self-reports of the relatively large and heterogeneous sample of participants proves to be adequate for qualitative analyses, which have given an answer to the aim of the research. The range of personal experiences obtained may generally be described as dominantly negative, implying that the effects of stopping crew change represent a serious threat for at least some proportion of the target population.

In spite of the methodological limitations, the results obtained provide a valuable contribution to this novel topic, which has both theoretical and practical relevance. Two issues imposed themselves as the most relevant. The first emerges from the personal experiences of seafarers left on board, who describe their reality as far away from the concept of 'key' or 'essential' workers. In spite of providing a vital service to the world, they do not see enough respect, or any acknowledgment of their sacrifice or dignity nor respect. They are left on board months after the end of their work contract, and insecurity about their leave date further adds to the common stressors and risks in a demanding, isolated and limited work environment. Their feelings of being "second-class citizens", as their right to sign off and return home is denied, emerge from the fact that some countries' governments, which are dependent on shipping services, are restricting crew changeovers but, at the same time, allowing their citizens to return home. Personal experiences from this study indicate how the seafarers' experience of being abandoned and forgotten in this situation actually deepens their perspective on the poor position of seafarers in the social community. This is illustrated by the quote below, from one participant, employed as a first deck officer in international cargo shipping, whose contract on board was doubled in the course of participating in the study. "*What annoys me the most in this situation is that seafarers are equated to tourists... Nevertheless, I have seen in my early deck cadets' days that we are nobody and nothing, and that this slavery is always justified by money - slave conditions are masked by payment - which is miserable. Therefore, I actually did not expect that our treatment would be any different in this situation.*" It might be said that the findings obtained extend earlier knowledge on the stressfulness of life on board, and shine additional light on seafarers' well-being and health [2, 14]. The second relevant issue emerges from the reports of seafarers who, due to the world pandemic, have spent a prolonged period at home. The suddenly-imposed restrictions on signing on have emphasised

problematic aspects of the precarious labour of seafaring [2, 14, 17], as a majority of reports indicate a well-being threatened by lack of income, job insecurity related to short-term contracting, and anxiety about the future.

Overall, the personal experiences of threats to seafarers' well-being gathered in this study portray existing underlying occupational structures in the shipping industry that are rendered more visible due to COVID-19. Previous studies in this area have shown that promotion of seafarers' well-being should be based on strengthening the seafarers' psychological capital and resilience [24, 25]. However, although these interventions are very important, it should be emphasised that interventions aiming to help seafarers to cope better (*secondary-level interventions*) are not enough in the promotion of the overall well-being of seafarers. Occupational stress management in seafaring is not efficient enough without improving work and psychosocial conditions in the maritime shipping sector [15, 16], i.e. without including *primary-level intervention strategies* [2]. Primary interventions in reducing stress and diminishing the occupational health risk of seafaring should be based on reduction in on-board stay (i.e. long separations from homes and families), respect for the work contract, minimising high workload and fatigue, improving the quality of life on board, and protecting seafarers' rights [2, 10, 15, 16, 26–29].

It is impossible to conclude the discussion of the results obtained without expressing a strong hope that the efforts and recommendations of international associations for the protection of seafarers' rights will bear fruit and that the crew changes of all seafarers around the world will take place soon. Hopefully, the implications of this study may serve to help us learn to deal with similar situations in the future, as well as to introduce measures that promote the overall well-being of seafarers, recognizing thus their essential role in "keeping the world moving."

5. Conclusion

The results obtained show that the well-being of seafarers may be seriously threatened by preventive measures relating to the COVID-19 pandemic. It has shown patterns according to which prolonged working periods in an isolated on-board environment threaten mental, physical and social well-being, which may reflect on the overall health, work engagement and safety of seafarers. On the other hand, a

strong threat to the economic well-being of seafarers who, due to the world pandemic, have stayed at home may also reflect on overall well-being and health.

Acknowledgments

The author thanks all the seafarers who participated in this study and all the organisations, associations and individuals who helped with the advertisement of the study.

Conflict of interest

There is no possible conflict of interest that may have influenced the research. The study was conducted without any source of funding.

References

- [1] Coronavirus disease (COVID-19) pandemic [homepage on the Internet]. IMO; 2020 [updated 2020 May 21; cited 2020 May 27]. Available from: <http://www.imo.org/en/MediaCentre/HotTopics/Pages/Coronavirus.aspx>
- [2] Slišković A. Occupational stress in seafaring. In: MacLachlan M, editor. Maritime psychology: Research in organizational and health behavior at sea. Cham: Springer; 2017. pp. 99-126.
- [3] Jepsen JR, Zhao Z, van Leeuwen WMA. Seafarer fatigue: a review of risk factors, consequences for seafarers' health and safety and options for mitigation. *Int Marit Health*. 2015;66(2):106-17.
- [4] Roberts SE. Fatal work-related accidents in UK merchant shipping from 1919 to 2005. *Occup Med*. 2008;58(2): 129-37.
- [5] Roberts SE, Marlow PB. Traumatic work related mortality among seafarers employed in British merchant shipping, 1976-2002. *Occupat Environ Med*. 2005;62(3):172-80.
- [6] Oldenburg M, Baur X, Schlaich C. Cardiovascular diseases in the modern maritime industry. *Int Marit Health*. 2010;62(3):101-6.
- [7] Oldenburg M. Risk of cardiovascular diseases in seafarers. *Int Marit Health*. 2014;65(2):53-7.
- [8] Kaerlev L, Hansen J, Hansen HL, Nielsen PS. Cancer incidence among Danish seafarers: A population based cohort study. *Occup Environ Med*. 2005;62(11):761-65.
- [9] Roberts SE. Work related mortality from gastrointestinal diseases and alcohol among seafarers employed in British merchant shipping from 1939 to 2002. *Int Marit Health*. 2005;56(1-4):29-47.
- [10] Slišković A, Penezić Z. Lifestyle factors in Croatian seafarers as relating to health and stress on board. *WORK*. 2017;56(3):371-80.
- [11] Chung Y, Lee PT, Lee J. Burnout in seafarers: its antecedents and effects on incidents at sea. *Marit Policy Manag*. 2017; 44(7):916-31.
- [12] Iversen RTB. The mental health of seafarers. *Int Marit Health*. 2012;63(2):78-89.

- [13] McVeigh J, MacLachlan M, Vallières F, Hyland P, Stilz R, Cox H, Fraser A. Identifying predictors of stress and job satisfaction in a sample of merchant seafarers using structural equation modeling. *Front Psychol.* 2019;10:70.
- [14] MacLachlan M, Kavanagh B, Kay A. Maritime health: A review with suggestions for research. *Int Marit Health.* 2012;63(1):1-6.
- [15] Slišković A, Penezić Z. Descriptive study of job satisfaction and job dissatisfaction in a sample of Croatian seafarers. *Int Marit Health.* 2015;66(2):97-105.
- [16] Slišković A, Penezić Z. Testing the effects of different aspects of contract and on-board internet access on seafarers' satisfaction and health. *Arh Hig Rada Toksikol.* 2016; 67(4):351-61.
- [17] Dacanay J, Walters, D. Protecting precarious workers in the global maritime industry: a case of regulatory failure? *Policy Pract Health Saf.* 2011;9(2):47-68.
- [18] Howitt D. *Introduction to qualitative methods in psychology.* 2nd ed. Essex: Pearson Education Limited; 2010.
- [19] Willig C. *Introducing qualitative research methods in psychology.* 2nd ed. Maidenhead: McGraw Hill / Open University Press; 2008.
- [20] Sullivan C, Gibson S, Riley S. *Doing your qualitative psychology project.* London: Sage; 2012.
- [21] Etikan I, Musa SA, Alkassim, RS. Comparison of convenience sampling and purposive sampling. *Am J Theor Appl Stat.* 2016;5(1):1-4.
- [22] BIMCO/ISF. *Manpower Report: The global supply and demand for seafarers in 2015.* Dalian Maritime University/Dearsley Maritime Consulting Ltd; 2015. Available from: <http://www.ics-shipping.org/docs/manpower-report-2015-executive-summary>. James
- [23] Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol.* 2006;3(2):77-101.
- [24] Hystad SW, Eid J. Sleep and fatigue among seafarers: The role of environmental stressors, duration at sea and psychological capital. *Saf Health Work.* 2016;7(4):363-71.
- [25] McVeigh J, MacLachlan M, Stilz R, Cox H, Doyle N, Frase A, Dyer M. Positive psychology and well-being at sea. In: MacLachlan M, editor. *Maritime Psychology: Research in organizational and health behavior at sea* (pp. 19–47). Cham: Springer. (2017).
- [26] Slišković A, Juranko A. General mental health of seafarers' partners: Testing the role of personal resources and human resource practices. *WORK.* 2019;64(2):291-301.
- [27] Slišković A, Juranko A. Dual life of seafarers' families: Descriptive study of perspectives of seafarers' partners. *Community Work Fam.* 2019;22(5):629-46.
- [28] Jensen OC, Sørensen JFL, Thomas M, Canals ML, Nikolic N, Hu Y. Working conditions in international seafaring. *Occup Med.* 2006;56(6):393-7.
- [29] Jepsen JR, Zhao Z, van Leeuwen WMA. Seafarer fatigue: a review of risk factors, consequences for seafarers' health and safety and options for mitigation. *Int Marit Health.* 2015;66(2):106-17.