

Depressions on board

A survey to the seafarers' mental health in the merchant marine

Research report



Author: Noa Eversdijk

Course: TRB Thesis Marof CU12197V8

Study: Maritime Officer

Study year/semester: 2020-2021, semester 8

Institution: HZ University of Applied Sciences

Supervising teacher(s): First supervisor Mr. J.H. Luteijn &

Second supervisor Mr. B.E.P. Klaassen

Place of publication: Vlissingen

Date of publication: 16/09/2021

Version: 2.0



Depressions on board

A survey to the seafarers' mental health in the merchant marine

Research report

Place of publication: Vlissingen

Date of publication: 16/09/2021

Student number: 00075682

Study year/semester: 2020-2021, semester 8

Course: TRB Thesis Marof CU12197V8

Supervising teacher(s): First supervisor Mr. J.H. Luteijn &

Second supervisor Mr. B.E.P. Klaassen

Version: 2.0

Source cover picture: ([Amatenstein](#))

Preamble

Doing this research for about half a year has been very interesting and informative to me. At first as a seafarer you may think that mental health issues is a distant reality. During my studies I was also thinking like this, but about two years ago, when I stepped on board for my first internship as a cadet, I changed my mind.

I saw a lot of ratings (also some officers) dealing and struggling with long contracts, limited access to internet and long distance relationships. Ratings in the merchant marine often have contracts for nine to ten months, where after their rest period is only a few months. At first I could not understand why they would choose to be so long from home, how can you be away from your family and friends for such a long time year in and year out? The moment I started talking with crewmembers on board about this I got an answer. A lot of ratings were telling me this: *'Long contract is not good of course, no one wants to be away from home for so long but we have to make money for our family in the Philippines. In our country is not so much money and good jobs, so we have to take care of our family.'*

Thereafter, the second thing I thought about, how are these people dealing with this? I know that Filipino seafarers are hardworking people who are always happy and never complain, but at the same time I was thinking, probably not everyone is able to deal with these issues? There must be some seafarers who cannot handle this year in and year out? Mental health issues must be something seafarers are coping with, but at the same time it is something that is not really familiar with people on shore.

I wanted to do this research to investigate the main reasons why seafarers on board develop mental health issues. By investigating this I may be able to help people who are dealing with these problems.

A special thanks to the office of *Seatrade Groningen* who made it possible for me to send the survey to their ships and to receive the results. I also want to thank the crew on board the vessels who were willing to participate. Finally, I want to thank Mr. Luteijn and Mr. Klaassen for helping and supervising me during my research.

Noa Eversdijk

Panama Canal, 01-06-2021

Abstract

Since the start of the COVID-19 pandemic mental health problems among seafarers became more visible to the world. Seafarers seem to have some unhappy moments while working on board for several months. Especially during this pandemic life on board has been tougher than usual, shore leave is nearly impossible, contracts are often extended and fear of the virus affects life on board. Eventually for some seafarers this can result in some mental health issues.

To obtain data about the development of depression and about the kind of factors which play a part in it, surveys have been sent to 25 different vessels of Seatrade's fleet. After two weeks 41 respondents have completed the survey, the final results are built on these 41 people giving their thoughts on COVID-19 related questions and on general questions related to mental health issues. With these results the following questions can be answered:

The main question of this study is as follows: **'How can depressions among seafarers on board merchant vessels be reduced within five years from now?'**

To answer the main question, the following sub-questions have been formulated:

1. What factors contribute to creating mental issues?;
2. What can people do themselves to be mentally healthy?;
3. What measures should be taken by the IMO, ILO and shipping companies to protect seafarers from mental issues?;

The answers to these questions provide a good insight into how depression develops, which regulations need to be adjusted and/or added to achieve this, what measures should be taken to treat it and to avoid it. Finally a recommendation to shipping companies has been created by use of the answers to these questions. In addition to this, also recommendations for the Maritime Labour Convention regarding mental health has been made.

After analysing the results the following things can be concluded. As a result of the COVID-19 pandemic social isolation got worse for seafarers because contracts were often extended. When looking closer to the Ratings, the biggest issues are long contracts, restricted internet access and COVID-19. While the biggest problems to Officers and Engineers are long contracts, restricted internet access and bad food quality. Seafarers can also take action themselves to avoid any mental issues, like exercising, participating in social activities and asking others for help. Even more than 93% of the respondents thinks that sports and fitness can improve the mental state of seafarers.

To accomplish a lower risk of depressions among seafarers, shipping companies and maritime organisations should change policies and regulations. The results have shown that good food seems to be very important to seafarers, especially to officers and engineers it is a big deal. So it is required that MLC regulations regarding food quality have to be improved. But also regulations regarding fitness/sports, internet facilities, employment contracts and a pandemic response plan have to be modified and/or implemented.

The following recommendations are created. Shipping companies should undertake the following actions to reduce the risk of mental issues among seafarers.

- On a regular basis mental health issues should be discussed on board;

- Mental health programs and procedures have to be created so that seafarers are able to receive the help which is needed;
- Make it possible for seafarers to have access to sports and fitness activities;
- Internet access for everyone on board has to be established;
- Food quality standards in the shipping companies' policy must be improved;

It is recommend for seafarers to undertake the following actions in order to treat or avoid mental health issues.

- Exercising on a regular basis in the on board gym can be useful for maintaining a healthy mind;
- Asking others for help when feeling depressed can be helpful to treat mental health issues. Talking to a phycologist can be effective as a treatment;

Table of contents

1. Introduction.....	1
2. Theoretical framework.....	3
2.1 Depression in general	3
2.2 Mental health of seafarers before Covid-19 pandemic.....	4
2.2.1 Traumatic experiences.....	4
2.3 Mental health of seafarers during Covid-19 pandemic.....	5
2.4 Influence on work conditions.....	5
2.5 Possible causes of depression among seafarers	6
2.6 How to improve mental health	7
2.6.1 Possible solutions for social isolation.....	8
2.6.2 Solutions for prevention and treatment of mental problems.....	9
2.7 Maritime law regarding mental issues.....	11
2.8 Conceptual model	14
2.9 Concepts and definitions	15
2.10 Abbreviations	16
3. Method.....	17
3.1 Data collection.....	17
3.1.1 Data collection sub-questions	17
3.2 Population and sample	18
3.3 Measurable values	18
3.4 Conditions	19
3.5 Privacy.....	19
4. Results survey.....	21
4.1 Results ratings & officers/engineers	21
4.2 Results ratings only.....	25
4.3 Results officers & engineers only.....	26
4.4 Results Covid-19 statements.....	27
5. Discussion.....	30
5.1 Validity survey questions	30
5.2 General reliability of the survey	31
5.2.1 Reliability survey questions.....	32
5.3 Verification of received data	32
6. Conclusion.....	33
6.1 Sub-question 1: What factors contribute to creating mental issues?.....	33



6.2 Sub-question 2: What can people do themselves to be mentally healthy?	34
6.3 Sub-question 3: What measures should be taken by the IMO, ILO and shipping companies to protect seafarers from mental issues?	34
6.4 Main question: How can depressions among seafarers on board merchant vessels be reduced within 5 years from now?	35
7. Advisory report/recommendations	37
7.1 Recommendations for shipping companies	37
7.2 Recommendations for seafarers.....	37
7.3 Recommendations for maritime law adjustment.....	37
References.....	41
Appendix 1: Hard copy Survey	44
Appendix 2: Instruction letter Captain	48
Appendix 3: Total survey results.....	49

1. Introduction

Depressions on board of ships is a bigger issue than most people think, people overlook the seafarers' mental health easily and it is also something sailors do not like to talk about in public. According to the ITF Seafarers' Trust & Yale University Seafarer Mental Health Study, is 28% out of 1572 seafarers screened positive for anxiety or depression and 35% of those with depression asked nobody for help ([Rafael Y. Lefkowitz, Seafarer Mental Health Study, 2019](#)).

'Life at sea requires mental resilience which most seafarers learn and get better at with experience. Every seafarer has his or her own coping mechanisms to deal with feelings of anxiety, loneliness, helplessness and depression. Seafarers just don't talk about it because they have never been asked. It is only when their coping mechanisms are stressed beyond the breaking point we see cases of nervous breakdowns and mental illnesses being reported to our People Claims team.'

The COVID-19 pandemic has presented another crisis. A rather lasting crisis, which is already showing an impact on the mental health of the seafarers, not only during their time on board the vessel, but also after their signoff. It does not have to be this way. This Insight is the fourth in our series focusing on seafarers' mental health. The aim is to provide time tested psychological tools that can help seafarers, in collaboration with their managers ashore, to sustain mental health through these testing times.

A seafarer's mental fatigue or stress is a direct result of the environment that he or she operates in. Traumatic events, from natural disasters to war, can damage mental health. The COVID-19 pandemic is no different. It has created huge uncertainty about every aspect of life. Like so many of us, seafarers fear for their own safety and also the safety of family and friends but those working aboard ships must endure these fears separated from their loved ones back at home.' ([Pathak, Seafarers in a time of pandemic – strategies for maintaining and improving mental wellbeing, 2020](#)).

During this covid-19 pandemic this matter became more visible to the world because more came in the news about it and people started talking about this subject. Therefore it is very important to know what causes these depressions and how to reduce or prevent it. While processing these different factors and effects, maybe some solutions like special mental trainings can be developed and implemented to improve the mental health among seafarers.

The aim of this thesis is to help seafarers with mental health problems by gaining more knowledge about this topic from seafarers on board the Seatrade fleet, in order to subsequently be able to prepare an advisory report for shipping companies.

The main question of this study is as follows: **'How can depressions among seafarers on board merchant vessels be reduced within five years from now?'**

To answer the main question, the following sub-questions have been formulated:

1. What factors contribute to creating mental issues?;
2. What can people do themselves to be mentally healthy?;
3. What measures should be taken by the IMO, ILO and shipping companies to protect seafarers from mental issues?;

For this research a certain conditions have been prepared to be able to collect and receive the right data for the researcher to answer the above mentioned main and sub-questions.

Scope in:

- Seafarers on board of container or reefer ships working for *Seatrade Groningen*;
- Research population is categorized in **Ratings & Officers/Engineers**;
- The COVID-19 pandemic effects are taken into account in this research;

Scope out:

- No distinction of mental health between men and women on board, results of women working in the merchant marine are not investigated;
- Seafarers who are not under contract of *Seatrade Groningen* during this research, because of leave period, are not able to participate in this research;

2. Theoretical framework

2.1 Depression in general

Depression is a mental illness which happens to a lot of people globally. It is an illness that can cause feelings of sadness, loss of interest in activities and sometimes suicide thoughts. In general can be said that depression affects how people feel, what they think and how people act. Research has shown that one in 15 adults (6.7%) in any given year has to deal with depressions. One in six people (16.6%) will experience depression at some time in their life. There is not a specific moment in life when depressions are likely to occur but research has shown that the first experienced depressions first appears during late teens to mid-20s. Some studies show that more women are suffering from depressions compared to men. Other studies also show that possibly one-third of women will experience a major depression once in their lifetime (Torres, 2020).

Depression can vary from mild to severe conditions, for this reason there are a lot of symptoms which can occur while suffering from depressions (Iversen, The Mental Health of Seafarers , 2012).

- Loss of interest of pleasure in activities;
- Loss of energy of increased fatigue;
- Feeling sad/having a depressed mood;
- Changes in appetite (can result in massive weight loss);
- Feeling worthless or guilty;
- Troubles with sleeping or sleeping too much;
- Some difficulties with concentrating, thinking and making decisions;
- Increase in purposeless physical activity;
- Thoughts of death or suicide;

It is possible that these symptoms are not completely complying with the reality because depressions can be complicated. Some people are experiencing a lot of ups and downs while other people can be depressed all of the time. Everyone is different and because of this it will result in different responds and symptoms during these depressions. In general can be said that when symptoms last for a minimum of two weeks and when they represent a significant change in your behaviour, the diagnosis of depression can be made. While determining if someone is dealing with a depression, also the medical conditions must be considered. Some medication in relation to thyroid problems, brain tumours and vitamin deficiencies can cause mimic symptoms of depression (Torres, 2020).

Looking at the maritime sector several studies done by GARD show statistics concerning deaths by illness and injuries, mental illness rate and suicide rate. This data has been collected over

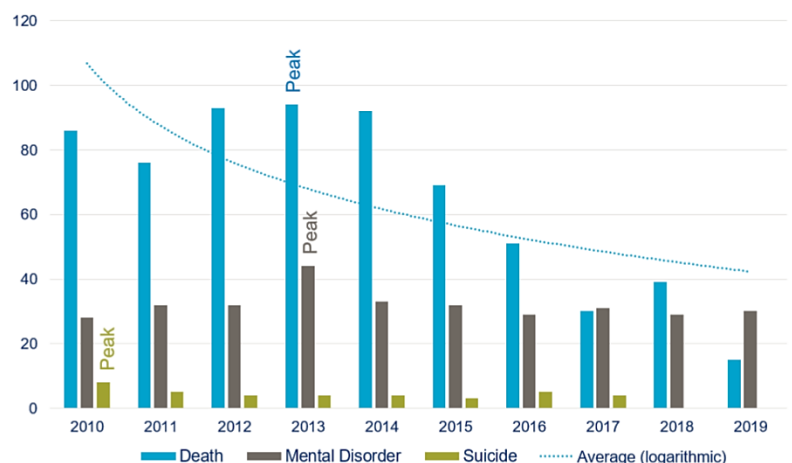


Figure 1. Statistics 2010-2019 (Pathak, Mental health and seafarers: It's time to talk, 2019)

a period from 2010 to 2019. Over this 10 years an average of 65 deaths, 32 cases of mental illness and 4.6 suicides each years has been reported. In [Figure 1. Statistics 2010-2019](#) can be seen that from the year 2013 a declining trend of deaths by injuries and illness is indicated. However, the numbers concerning mental disorder and suicide remained somewhat unchanged. Only for the last two years no suicides were reported in 2018 and 2019, so a slight change in these two years according to these numbers ([Pathak, 2019](#)).

2.2 Mental health of seafarers before Covid-19 pandemic

Depressions do not start suddenly, often there is a certain period of unhappy events which contribute to creating these mental problems. Hereby is the mood of the person an important factor. The mood of a person on board a ship can be affected by: contract length, stressful work, money problems, food quality, internet access, seasickness and bullying. When the mood of a person is good, they can cope with more negative events/experiences before being at risk of a depression. So people who are already experiencing a bad mood are more vulnerable to creating depressions ([Lefkowitz & Slade, 2019](#)).

When talking about mental health issues in general, some studies have shown that one in five people suffer from a mental condition each year ([Swift, 2015](#)). This number is higher than the years before because nowadays people are becoming more open about mental health, a result of this is a rise in awareness of these problems and stigma falls. Looking closer to the maritime sector seafarers are more likely to experience mental health problems like depression. These problems are not only caused by heavy workloads and homesickness but also bullying, fatigue, fear of piracy and addiction to alcohol and drugs are major causes ([Iversen, The Mental Health of Seafarers, 2012](#)).

The maritime industry is still known as a masculine world. The fact is that there is a kind of social pressure on men to not present their emotions like feelings of sadness, loneliness and depressions. Therefore it will be difficult for other people to recognize any of these problems inside this specific group of people. The difficulty of this recognition may be a big factor contributing to the mental health problems on board of vessels. When recognition of mental problems by male crew members on board is difficult it will be hard to undertake the right actions to prevent it or to provide some support to these mental issues. The second reason why people do not want to tell their surroundings they have mental problems is because people with these problems are often not being hired by employers, most employers think that these persons are not able to do certain things or make more mistakes caused by their mental condition. In general this makes it very difficult for people to talk about mental issues at work ([Lucieer, 2018](#)).

2.2.1 Traumatic experiences

Being a seafarer can be a risky job because a lot can go wrong on board a ship. A vessel can have a collision with another ship, crew members can be seriously injured while working with dangerous equipment, high risk for a vessel to run aground or extreme weather might be damaging to the ship. Depending on the situation all of these events can be traumatic for the crew members on board. These traumatic experiences can be the cause of mental illness like depressions among the affected crew. Besides this, most of the vessels operate worldwide and there is a chance the vessel goes to places where it is not so safe and peaceful. In some places it can be political unstable, sometimes a war is going on and in some areas pirates are active. Also these events can be traumatic to seafarers. Studies have shown that crew members affected by violent piracy accidents in recent years, suffer from mental illness like depressions and post-

traumatic stress disorders. But neither the MLC, nor traditional maritime law specifically address mental health care. The Admiralty Court decided several times that a seafarers' right to free medical care includes mental health care (Swift, 2015).

2.3 Mental health of seafarers during Covid-19 pandemic

The coronavirus affects the maritime sector a lot, the pandemic causes difficulties and challenges. Since the maritime shipping industry is one of the biggest sectors in the world, a big number of people are feeling the negative effects of this pandemic. Some of these negative effects are:

- Inability of signing off;
- Heavy workloads, crew members are forced by this pandemic to stay longer on board which causes them to experience more work over a longer period of time. Often this will be recognised by the seafarer as 'Heavy workloads';
- Fear of the virus;
- Worrying about lack of Covid-19 precautions on board;



Figure 2. Abandoned at sea (ITF, 2020)

Surveys unveil that it is a harsh reality for seafarers not being able to get home, a lot of frustration at extended contracts and worries about the safety of their family and friends. Even some crew members fear about their careers, not just their jobs (Blackburn, Mentally Healthy Ships, 2020) (Hebbar & Mukesh, 2020). Crew members are fed up, tired, homesick, lonely, sometimes suffering illness and pain and a lot of seamen feel 'abandoned' (Figure 2. Abandoned at sea)

2.4 Influence on work conditions

Several reports are showing that mental health issues start to rise by crew members when vessels are sailing with fewer people, sickness increases and hygiene standards must be at hospital-like levels. Besides these problems, nowadays the crew on board also has to deal with the pandemic. The demands of meeting the high standards on board while also follow the extra rules caused by the pandemic, like social distancing, are hard to maintain. According to this article a lot of sailors are struggling to follow the new guidance (Hebbar & Mukesh, 2020) (Ovcina, 2020).

When looking at the impact on work standards and the welfare of seafarers it is not positive. A lot of seafarers are feeling stressed and unsupported by the shipping companies. A significant number of seafarers have these feelings which does impact the work standards and welfare. In combination with limited access to medical services while stress increases, it is affecting the work environment which creates a real risk of self-harm incidents. Eventually, these accidents can compromise safety at all levels on board (Hughes, 2017).



Figure 3. Trapped on board (Harris, 2020)

“We are in the midst of a welfare crisis. While Q1 showed us how seafarers suffered as COVID-19 struck home and provided insight into the support that was needed, the Q2 report highlights the cost of inaction and the need for immediate solutions,” Andrew Wright, Secretary-General of The Mission to Seafarers, commented (Ovcina, 2020).

2.5 Possible causes of depression among seafarers

Life on board can be hard, seafarers are away from home for several months and have limited contact with family and friends. Seafarers have to deal with many hours of work, seasickness, limited spaces, heat, noise, vibrations and motions of the ship. In the merchant marine seafarers are predominantly male, speak a varied number of languages and come from a lot of different nations. In the past the large distance from home and the working and living conditions have usually been assumed to contribute to high suicide rates among seafarers (Sampson, 2013).

Stress can also be a factor when it comes down to depressions. Working on board can give a seafarer a lot of work-related stress, six key areas can cause this kind of stress. These are: the level of control seafarers have over their work; relationships at work; the support received from management and colleagues; the demands of the job; how it is managed; and the seafarers' role in the organization. Common symptoms of stress are: loss of concentration, substance abuse, anger and frustration, insomnia, family conflict, and physical illnesses such as heart disease, migraine, headaches, anxiety, back problems and stomach problems (Iversen, *The Mental Health of Seafarers*, 2012).

According to several studies the most depressions and suicidal rates are caused by social isolation. Working in the maritime sector as an officer, engineer or rating social isolation is inevitable for the most people. Seafarers are working many months at sea while having limited access to communication with home. But how much effect it has to seafarers is uncertain, this completely depends on the kind of person and the situation. Several studies have shown that social isolation contributes to poor mental health and that social connection is the key to a positive mental health (Blackburn, *Mentally Healthy Ships*, 2020) (Helen Sampson, 2018).

Social isolation can be defined as follows: ‘social isolation is a state of separation from others, which is often involuntary and experienced negatively’. Depending on the type of person social isolation can cause the following problems: feelings of boredom, anger, despair, marginality, exclusion, sadness, frustration and mostly loneliness. “Nowadays crew numbers have fallen, working hours increased, responsibility and also paperwork increased” (Blackburn, *Mentally Healthy Ships*, 2020). These developments over the last time are all contributing to a rise in social isolation for seafarers. In addition to this emotional talk about feelings and personal subjects have never been common at sea where social life is rigidly hierarchical and where

taking social distance is normal in the senior ranks. There are some more factors which have little contribution to social isolation on board of ships:

- **Multinational crewing;**
This can manifest itself in a lack of shared background and common language. Because of this it is harder to have a deeper understanding of one another.
- **A lack of sufficient space for communal activities like eating and recreation;**
This can result in separation between different ranks and will contribute to social isolation.
- **Faster turn-around times;**
This has resulted in brief and infrequent shore leaves for the crew. This takes away the possibility for the crew members to do social activities which are not or limited possible on board. According to a Crew Communication Survey, 76% of seafarers reported never or rarely going ashore ([Futureonautics, 2014](#)).

What makes it problematic is that social isolation is both a cause and symptom of a range of mental health conditions. These conditions make it harder to both retain crew and maintain safety ([Swift, 2015](#)). The Sailors' Society found in a joint study with Yale University that more than a quarter of seafarers suffer from depressions, but the problem is that many of them did not ask for help ([Rafael Y. Lefkowitz, Seafarer Mental Health Study, 2019](#)). This may be due to the fact that the threshold on board is very high regarding these kinds of matters. The common idea on board of most ships is perhaps that sailors should be strong and should not feel any emotion, therefore this can result in most of the people being too afraid to approach the captain for help regarding these kind of matters ([Nautilus International, 2019](#)).

2.6 How to improve mental health

Staying healthy is for a lot of people very important, not only physically but also mentally. Most people are focussing more on their physical health instead of their mental health. This comes down to exercising every day, losing weight and so on. But is this healthy? Being physically healthy is for everyone different, for some people it is exercising two times a week and for other people it is maybe six times a week. Some people set the bar really high, this can cause a lot of stress, fatigue and maybe mental issues. The thing what should be remembered is that mental health is just as important as the physical health. The reason for this is the connection between the two, a healthy mind brings a stronger physical health ([Pathak, 2020](#)).

It seems to be difficult to define when a person is mentally healthy, all of this depends on a various number of factors. Every person lives in a different culture where mental health might not have the same value as other cultures. Nobody lives in the same conditions when talking about economic, political and environmental influences. All of these factors have an effect on a person and defines you as an person, this means that it also affects the psychological state. But in general people feel happy and enjoy life when they feel mentally healthy. Positive thoughts, being able to cope with setbacks and being satisfied with social relationships are the perfect ingredients for a healthy mind ([ISWAN, 2019](#)).

According to various studies the best 'medicine' for a healthy mind is doing sports ([Helen Sampson, 2018](#)) ([Rafael Y. Lefkowitz, Seafarer Mental Health Study, 2019](#)). Sports is very good for the mental resilience. And it has even more positive effects: distraction from negative thoughts, less worrying behaviour, more self-esteem and a more positive self-image. The brain

creates these happy thoughts while exercising. Here are some more things what can help to improve the mental state ([Helen Sampson, 2018](#)):

- Turn worrying thoughts into positive thoughts
- Bring structure in life
- Make time for nice things
- Plan a day off regularly and get enough sleep
- Eat healthy on a regular basis
- Talk about feelings with other persons

For some persons it can be very helpful to reward themselves for the hard work. For instance, treat yourself on a snack or buy something nice after an intense workout. These rewards will keep the motivation high and will help achieve the set goals ([Helen Sampson, 2018](#)).

2.6.1 Possible solutions for social isolation

The problem on board of many ships is that most of the crew members do not feel connected with each other. The following solutions can make a great contribution to the social connection between crew members on board and this can help to decrease the social isolation ([ISWAN, 2019](#)).

Communication;

Access to internet is very important for seafarers when they are working on board. By use of the internet they can communicate with their family and friends at home. Some studies reported that only 36% of seafarers has no or only occasional access to some form of communication via internet. On Containerships, Bulk carriers and General cargo ships only 20% of the seafarers has access to internet.

Shore leave for all ranks;

Shore leave makes it possible for seafarers to do some normal-life activities which are not possible on board. Mentally this can be very positive for seafarers because they are able to escape the isolated and tuff life of the maritime world.

Social activities on board;

Scheduled social activities between crew members every week can be a solution to lower the social isolation. Shipping companies can organize this and instruct every master to make sure that every crew member has access to social activities on a regular basis.

Mentoring;

A good mentor on board who can provide proper guidance can greatly benefit the crew in terms of mental health. Such a mentor can function as a confidant, mental health coach and point of contact. For shipping companies it can be practical to educate masters to become well trained mentors on board of the companies' vessels ([Safety4sea, 2020](#)).

Restrictions on alcohol (but no ban);

An alcohol addiction can lead to mental and physical dependence. With heavy use, severe physical withdrawal symptoms occur when stopping. Also mental health issues like feelings of sadness and even depression can occur during heavy drinking ([Drugsinfoteam, 2019](#)).

Provision of daily news;

The crew members can feel less isolated when they are able follow the news on a regular basis.

Provision of several kinds of entertainment;

To entertain the crew members a few options can be considered by the shipping company. The vessel can be provided with newspapers, documentary magazines, video recordings of major sports and news events, movies, game consoles, card games and board games.

Flexibility in length of contracts;

Shorter contracts and longer leave periods will help seafarers to maintain good relationships with family and friends at home. This can be of benefit to the mental health of seafarers.

By breaking down social isolation and reminding people what it means, what it does, why it matters and what can be done about it, step by step it gets opened up and the best solutions to this problem can be found (ISWAN, 2019) (Safety4sea, 2020).

2.6.2 Solutions for prevention and treatment of mental problems

According to ISWAN there are various options which can be used to treat and prevent mental illness on board of ships. The most important factor which will be treated by these measures is social isolation (ISWAN, 2019). The practical measures could be the following:

- Make good and confidential counselling possible for every seafarer. This counselling could be carried out by the master on board or a special educated person who visits the vessels. Counselling could also be done in *seafarers' centres* by special trained persons of the shipping company. Thereby it is very important to have good and effective training programs to educate these people about counselling seafarers regarding mental health.
- It seems to be very efficient to execute Web-based counselling. Especially in this global pandemic online counselling can be the perfect solution. There are a few companies which are specialised in Web-based counselling for people suffering from mental problems. *Togetherall (Big White Wall)* is one of these companies, this business consist of 250 organisations which are located around the globe. All of these organisations are an online service providing access to millions of people who are suffering from anxiety, depressions and other common mental health issues (Togetherall, 2018). It is a service which is used by a lot of employees in the public-sector institutions like the *British Ministry of Defence*. An Australian company called *MoodGYM* provides also these kind of online counselling, but the big difference compared to other companies is that *MoodGYM* provides anonymous counselling. This can be of benefit to seafarers who are ashamed of their mental health problems, providing the option to receive guidance anonymously can lower this barrier. *MoodGYM* is based on Cognitive Behaviour Therapy and Interpersonal Therapy which have been shown to be successful in preventing and treating depression and anxiety. The *Australian Commonwealth Department of Health and Ageing* funds this organisation and because of this provided service *MoodGYM* is free of charge for Australians (MoodGYM, 2006). For some seafarers it can already benefit from counselling via phone, email and text. *Hunterlink* does provide this service in Australian ports. They work in partnership with businesses across the whole of Australia to improve the mental health and wellbeing of seafarers (Hunterlink, 2015).
- Mental training on board is also an option. The already existing *Sailors' Society's Wellness at Sea programme* has proved to be very efficient. This program includes the expansion in training of senior ranks, this training will educate them to detect and to support mental illness among their colleagues. This organisation has an innovative Wellness at Sea coaching programme, e-learning platform and a free app to help seafarers stay

physically and mentally fit. The coaching programme helps shipping companies achieve the best performance from their crews by maintaining high levels of welfare. They provide these trainings both online and in class, while working in partnership with colleges and companies (Sailors' Society , 2014). In particular, Masters need to supervise crew members with mental health conditions who have been given clearance to work aboard.

- Make it possible for seafarers to have access to books about health and wellbeing, also called 'mood-boosting' books. To create some awareness among seafarers about the importance having a healthy mind, printed information about this matter should be available, such as flyers and posters hanging in the accommodation.
- High quality food, leisure facilities and enough rest is important for a good mental health on board a ship. A good diet and some exercising are known to assist in the prevention and recovery from mild mental health problems. Thereby is enough rest important for avoiding fatigue among seafarers.

To arrange all these measures it is important to create a good Policy and Practice. ISWAN has created a clear Step-by-Step plan which can be seen in

Figure 4. Step-by-Step plan (Blackburn, Step-by-step plan, 2020).

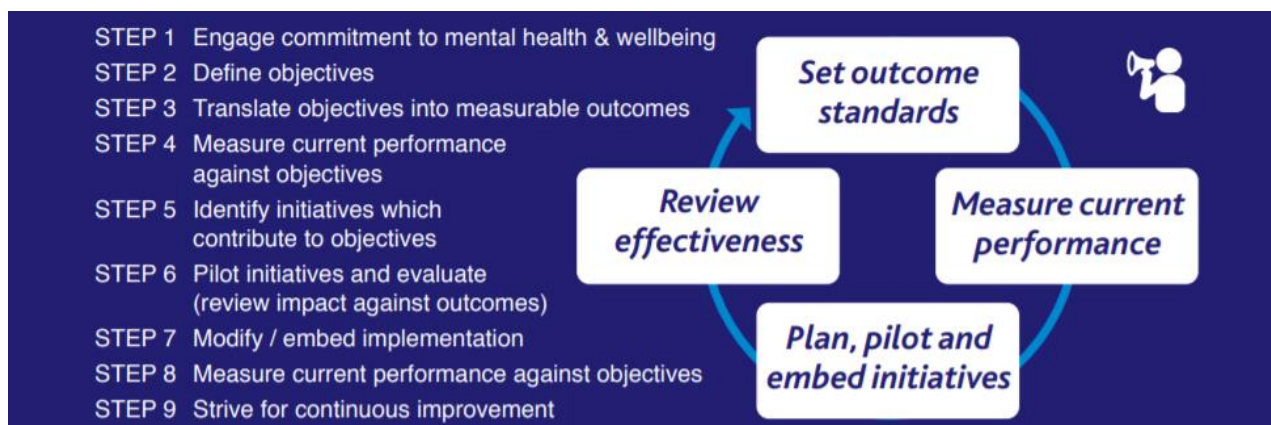


Figure 4. Step-by-Step plan (Blackburn, 2020)

2.7 Maritime law regarding mental issues

Since 2006 all of the regulations regarding working conditions for seafarers are combined in the Maritime Labour Convention (MLC) which is a treaty of the International Labour Organization (ILO). The main purpose of this convention is to improve the working conditions for seafarers globally. The MLC treaty is very important, therefore it became one of the main pillars of the International Maritime Organization (IMO). The four main pillars from IMO are SOLAS, MARPOL, STCW and MLC (IMO, 2006).

Looking at all the contents in MLC there are a lot of subjects to be found which seems to be, according to theoretical knowledge, having a great influence on the mental health of seafarers. The subjects which play a big role in this matter are recreation, food/catering, working hours/rest hours, social security and medical care (ISWAN, 2019).

See a part of guideline B2.3 Hours of work and hours of rest as an example here below:

Regulation 2.3 - Hours of work and hours of rest

4. In determining the national standards, each Member shall take account of the danger posed by the fatigue of seafarers, especially those whose duties involve navigational safety and the safe and secure operation of the ship.

5. The limits on hours of work or rest shall be as follows:

(a) maximum hours of work shall not exceed:

(i) 14 hours in any 24-hour period; and

(ii) 72 hours in any seven-day period;

or

(b) minimum hours of rest shall not be less than:

(i) ten hours in any 24-hour period; and

(ii) 77 hours in any seven-day period.

6. Hours of rest may be divided into no more than two periods, one of which shall be at least six hours in length, and the interval between consecutive periods of rest shall not exceed 14 hours (IMO, 2006).

See a part of guideline B3.1.11 Recreational facilities, mail and ship visit arrangements as an example here below:

Guideline B3.1.11 – Recreational facilities, mail and ship visit arrangements

'1. Recreational facilities and services should be reviewed frequently to ensure that they are appropriate in the light of changes in the needs of seafarers resulting from technical, operational and other developments in the shipping industry.

2. Furnishings for recreational facilities should as a minimum include a bookcase and facilities for reading, writing and, where practicable, games.

3. In connection with the planning of recreation facilities, the competent authority should give consideration to the provision of a canteen.

4. Consideration should also be given to including the following facilities at no cost to the seafarer, where practicable:

- (a) a smoking room;
- (b) television viewing and the reception of radio broadcasts;
- (c) showing of films, the stock of which should be adequate for the duration of the voyage and, where necessary, changed at reasonable intervals;
- (d) sports equipment including exercise equipment, table games and deck games;
- (e) where possible, facilities for swimming;
- (f) a library containing vocational and other books, the stock of which should be adequate for the duration of the voyage and changed at reasonable intervals;
- (g) facilities for recreational handicrafts;
- (h) electronic equipment such as a radio, television, video recorders, DVD/CD player, personal computer and software and cassette recorder/player;
- (i) where appropriate, the provision of bars on board for seafarers unless these are contrary to national, religious or social customs; and
- (j) reasonable access to ship-to-shore telephone communications, and email and Internet facilities, where available, with any charges for the use of these services being reasonable in amount' (IMO, 2006).

See a part of guideline B3.2 Food and catering as an example here below:

Regulation 3.2 – Food and catering

'Purpose: To ensure that seafarers have access to good quality food and drinking water provided under regulated hygienic conditions

1. Each Member shall ensure that ships that fly its flag carry on board and serve food and drinking water of appropriate quality, nutritional value and quantity that covers the requirements of the ship and takes into account the differing cultural and religious backgrounds.
2. Seafarers on board a ship shall be provided with food free of charge during the period of engagement.
3. Seafarers employed as ships' cooks with responsibility for food preparation must be trained and qualified for their position on board ship.

Each Member shall ensure that ships that fly its flag meet the following minimum standards:

- (a) food and drinking water supplies, having regard to the number of seafarers on board, their religious requirements and cultural practices as they pertain to food, and the duration and nature of the voyage, shall be suitable in respect of quantity, nutritional value, quality and variety;
- (b) the organization and equipment of the catering department shall be such as to permit the provision to the seafarers of adequate, varied and nutritious meals prepared and served in hygienic conditions; and

- (c) catering staff shall be properly trained or instructed for their positions' (IMO, 2006).

See a part of guideline B4.1 Medical care on board ship and ashore as an example here below:

Regulation 4.1 - Medical care on board ship and ashore

To protect the health of seafarers and ensure their prompt access to medical care on board ship and ashore, the following ILO guidelines are created. The ILO's Guidelines for implementing the OSH provisions of the MLC, 2006 [32] include a section on Occupational Mental Health, which calls upon "competent authorities, after consultation with ship owners' and seafarers'

organizations, to provide ship owners with effective advice on measures to minimize the adverse effects of work-related factors on mental health. These may include steps to identify and reduce workplace stressors; increasing awareness of the signs of early mental distress to enable an early response to be made; access to recreational and welfare facilities (MLC, 2006, Regulations 3.1 and 4.4), and organizational arrangements that enable seafarers to raise issues about mental stressors and secure remedies for them (IMO, 2006)."

See a part of guideline B4.4 Access to shore-based welfare facilities as an example here below:

Regulation 4.4 - Access to shore-based welfare facilities

To ensure that seafarers working on board a ship have access to shore-based facilities and services to secure their health and well-being Regulation 4.3, Guideline B4.3 also provides that States should take account of the latest version of the Guidance on Eliminating Shipboard Harassment and Bullying, jointly published by the International Chamber of Shipping and the International Transport Workers' Federation [31], when adopting laws, regulations or guidelines to safeguard occupational safety and health on board ship. The ILO also recommends 'to take the issue of harassment and bullying into account in the risk evaluations conducted by ship-owners and in investigations undertaken by the competent authority into the causes and circumstances of all occupational accidents and occupational injuries and diseases resulting in loss of life or serious personal injury.' Guideline B4.3.1(2)(o) includes mental effects of fatigue among the matters to be incorporated into the national guidelines for the management of occupational safety and health. Guideline B4.3.1(3) provides that the risk assessment and reduction of exposure on the matters referred to in paragraph 2 of the same guideline should take into account the mental health effects of fatigue. Moreover, the necessary measures should include preventative measures in order to combat risk at the source. Guideline B4.3.6(2)(c) provides that consideration should be given to include psychological problems created by shipboard environment as subject of investigation (IMO, 2006).

2.8 Conceptual model

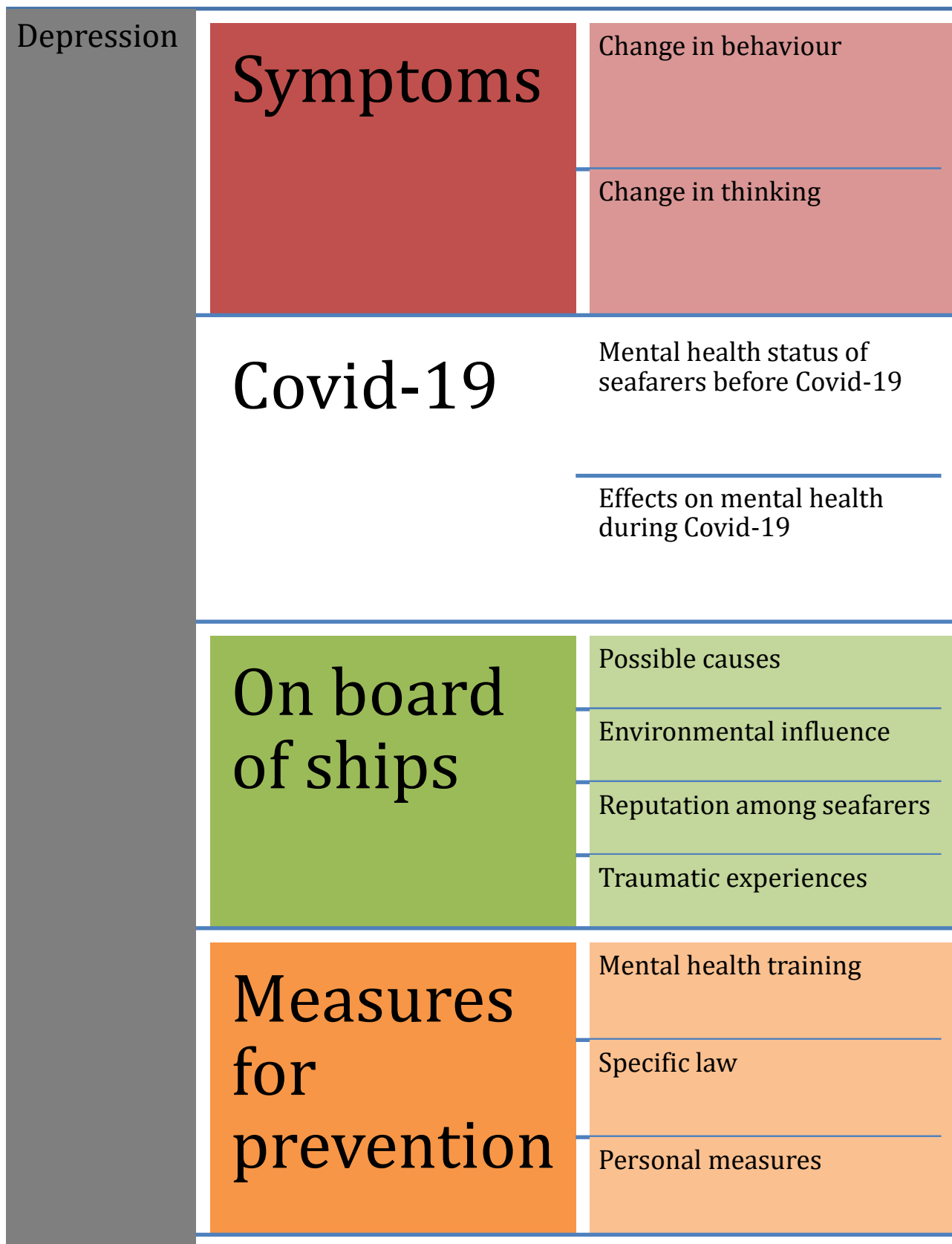


Figure 5 Conceptual model Depression

2.9 Concepts and definitions

Table 1 Definitions

Concept:	Definition:
Fatigue	A symptom that may be difficult for the patient to describe and words like lethargic, exhausted and tired may be used.
Pandemic	An epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people.
Stigma	A mark of disgrace or infamy.
Run aground	When a vessel makes contact with the bottom of the fairway.
Traumatic	Psychologically or emotionally stressful in a way that can lead to serious mental and emotional problems.
Post-traumatic stress disorder	A psychiatric disorder that may occur in people who have experienced or witnessed a traumatic event such as a natural disaster or a serious accident.
Merchant marine	The privately or publicly owned commercial ships of a nation.
Officer	The person in charge of navigation, mooring and unmooring, stability, rescue and fire extinguishing equipment, maintenance, order and discipline, loading and unloading, take care of the cargo.
Engineer	The person responsible for operating the propulsion plants and support systems on board crew, passengers and cargo seafaring vessels or other watercraft.
Ratings	The person who steer the ship, keep watch and assist the Navigation (Deck) Officer in a range of navigational, operational and cargo duties. In port secure the ship to the dock, carry out maintenance and contribute to the security of the vessel.
Hierarchical	An arranged order from the most to the least important people
Cognitive behaviour Therapy	Cognitive behavioural therapy (CBT) is a psycho-social intervention that aims to improve mental health.[3] CBT focuses on challenging and changing unhelpful cognitive distortions and behaviours, improving emotional regulation, and the development of personal coping strategies that target solving current problems.
Interpersonal Therapy	A form of psychotherapy in which the focus is on a patient's relationships with peers and family members and the way they see themselves. The goal is to help people to identify and modify interpersonal problems.

Member state/flag state

A flag state is the country in which a ship is registered and of which it therefore flies the trade flag

2.10 Abbreviations

Table 2 Abbreviations

Abbreviation:	Original word:
ISWAN	International Seafarers' Welfare and Assistance Network
MLC	Maritime Labour Convention
ILO	International Labour Organisation
IMO	International Maritime Organisation
SOLAS	Safety Of Life At Sea
MARPOL	Maritime Pollution
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers

3. Method

3.1 Data collection

To obtain the theoretical knowledge about depression in general, desk research has been carried out. By sending a survey of 26 multiple choice questions to various vessels inside the Seatrade fleet, this qualitative research has been carried out. This survey was sent to 16 vessels including a certain number of seafarers in this specific shipping company, to get a general view of the average seafarer on the worldwide problem regarding mental health issues. The results obtained from the surveys have been used to answer the sub-questions. The answers to the sub-questions together form the answer to the qualitative main question for this thesis.

Two versions of the survey have been created, this is a digital version and a paper version/hardcopy version, see [Appendix 1: Hard copy Survey](#). It has been made possible for the respondents to complete the survey on their phone or computer by scanning the attached QR-code, thereafter the participant will be redirected to the *Google Forms* online version. Because access to internet on board is not always available, a paper version was also available to the participants. These hardcopies have been collected, scanned and were sent back to the researcher.

The survey largely consists of multiple choice questions since this is for the candidate the most easy and quick to fill in. Because the respondents can quickly respond to many items, wide sampling and coverage of content is possible. For the researcher these kind of questions are easy to analyse while open questions take more time to answer which can reduce the willingness to complete the survey ([Kupsch, 2003](#)). In addition, the multiple choice questions also provide the question results in a more structured way. For a part of all the questions a Likert scale will be used. This kind of scale will be used to let the participant being able to give an accurate indication of their thoughts about the questions/statement, therefore Likert scales are great for measuring attitudes or behaviours of respondents ([SurveyMonkey, 2019](#)).

Because mental health issues can be experienced as a sensitive subject to a lot of people, the survey is completely anonymous. The great advantage of anonymity is that more response can be expected to the survey because the most of the people consider their privacy as very important and this may result in people being more willing to complete the survey. Another big advantage is that people are now less likely to give socially desirable answers, so people will be much more honest and sincere in giving their answers to the questions because of their anonymity ([Thomas, 2019](#)).

3.1.1 Data collection sub-questions

Sub-questions:

1. What factors contribute to creating mental issues?;

The data collection method used for this question is a combination of desk-research and quantitative data collection by surveys. This desk-research has been done to the following subjects /topics:

- The work and living conditions on board of merchant ships;
- The effect of traumatic experiences;
- Reputation of mental health among seafarers;
- Effects of the COVID-19 pandemic on seafarers' mental health;

The survey contains several questions regarding the above mentioned topics. The purpose of the questions regarding these subjects was to get a view on the experiences of seafarers currently working on board a merchant ship regarding these subjects. Finally, the data received by this survey, in combination with the collected information by desk-

research, has been used to answer sub-question number one.

2. What can people do themselves to be mentally healthy?;

The data collection method used for this question is a combination of desk-research and quantitative data collection by surveys. This desk-research has been done to the following subjects /topics:

- Symptoms of depression;
- The effect of sports/fitness to mental health;
- Participating in mental health programs for seafarers;

The survey contains several questions regarding the above mentioned topics. The purpose of the questions regarding these topics was to get a view on the experiences of seafarers currently working on board a merchant ship regarding these subjects. The data received by these questions, in combination with the collected information by desk-research, has been used to answer sub-question number two.

3. What measures should be taken by the IMO, ILO and shipping companies to protect seafarers from mental issues?;

The data collection method used for this question is mostly desk-research, the survey contained one question related to the topic of this sub-question. The respondents have been asked if they are satisfied with the current regulations regarding the mental health of seafarers. Desk-research has been done to the following subjects /topics:

- Relevant parts of the IMO's *Maritime Labour Convention*;
- Existing measures investigated by other researchers;

3.2 Population and sample

The research population in this study is seafarers (officers and ratings) working in the merchant marine on a container/reefer vessel belonging to the Seatrade fleet, out of this population a sample has been taken to represent this complete population. The size of the population is approximately 180 seafarers. Seatrade currently has around 15 suitable vessels where this research can be carried out, these 180 seafarers is the total amount which is currently on board these ships.

According to the *Corpos* sample calculator, a minimum of 63 respondents was needed to accomplish a reliable result. These 63 respondents are calculated with a 10% margin of error and a confidence level of 95% ([Roasoft Inc. , 2019](#)). The shipping company helped to distribute the survey among the selected vessels, aiming to get as much response as possible, but the success of the survey depended entirely on the willingness of the seafarers to complete the survey. Furthermore, the ships returned the filled-in surveys to the company office and eventually the results were send back to the researcher.

3.3 Measurable values

The questions which are used in the survey can be categorized into several subjects where its value can be measured. These are the main categories:

- General information respondent (anonymous);
- Mental illness on board;
- Crew members' mental and physical experiences while on board;
- Mental health during Covid-19;

- Existing legislation mental health seafarers;

For each subject several questions have been created to obtain data(values) about each subject mentioned here above. In the next phase all of this data was analysed and contributed to answer the main- and sub-questions.

3.4 Conditions

Investigating the complete merchant marine is in this short time range not possible to be executed by one researcher. Therefore is the delimitation for this thesis as follows. For this thesis research was done among crew members on board of container/reeder vessels managed by Seatrade. These crew members are categorized into Ratings and Officers/Engineers. The investigation will focus on the mental health of crew members on these type of vessels and whereby the effect of COVID-19 is included in this research.

In this study no distinction has been made between men and women on board, because the number of women working in the maritime sector is small. In order to obtain a reliable picture of the current situation with regard to the mental state of women in the maritime sector, research must be carried out with a wider range on more types of ships. Unfortunately this is not possible for this thesis.

Furthermore, only seafarers who are currently under contract on board of a vessel were asked to complete the survey because this research is aimed at improving the mental health of seafarers on board, not sailors who are at home. The main reason for this is that seafarers on board may have a better view on the current problem, therefore they will be better able to express their views and opinions.

3.5 Privacy

The survey includes a privacy statement which informs the respondent about what measures the researcher will take to guarantee the privacy of the participant. This statement states briefly that the respondent must not put any personal details on the survey form and that no personal details will be asked such as name, gender or nationality. This will ensure that none of the surveys can be backtracked to any of the respondents. In the privacy statement is also mentioned with whom the results of the survey is going to be shared and for what purposes the results will be used, this gives confidence to the respondents and will positively influence the willingness of the participants. At the end of the privacy statement, the participant was told that the respondent will automatically agree to the privacy statement when the person completes the survey.

A digital variant of the survey was available in Google Forms. The big advantage of this variant is that the chain length between the respondent and the researcher is shorter compared to the hard copy version, because of this there is a lower chance of survey data getting lost or improper treatment. This way of collecting data does better safeguard the respondent's privacy. In the description of the survey the respondent was informed about this digital variant and in addition, it was also mentioned here that the Google Forms document can be accessed by the attached QR-code.

Regarding practical and privacy arrangements an instruction letter has been written which was intended for the master, see [Appendix 2: Instruction letter Captain](#). This letter informed the masters about the research itself and about how to handle the documents. The captains were



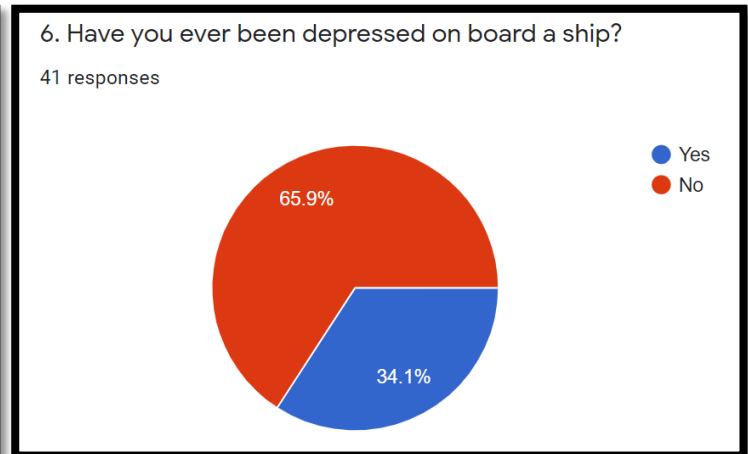
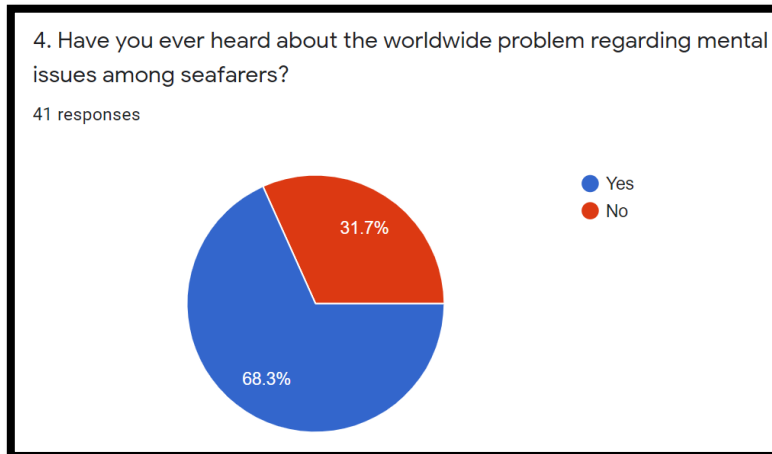
asked to scan the paper documents and to send these to the company office, the company did collect all the documents and returned these to the researcher. By means of this letter the master was well instructed to inform the crew correctly about the survey. Since the survey is anonymous, no personal details were shared on the documents.

4. Results survey

In this chapter the results from the survey are being showed by means of various diagrams. This chapter is divided into different parts, a part which consists the results from ratings and officers, one part about ratings only and a part about officers/engineers only. This has been done to show the difference in results between the two categories/ranks.

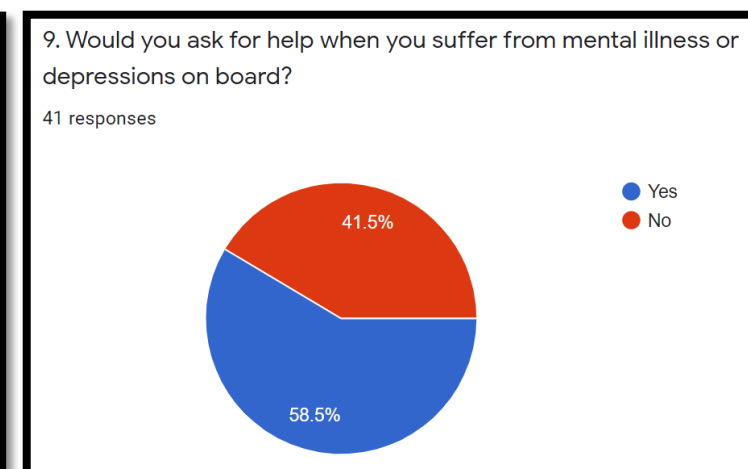
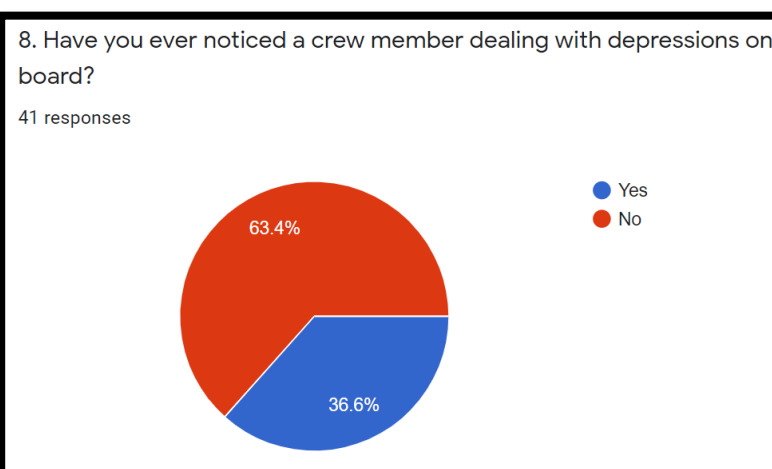
4.1 Results ratings & officers/engineers

Below the results of 41 respondents, ratings & officers/engineers combined, are shown. The results are presented through the questions asked in the survey. Below only the questions with a relevant result to this research are shown. See Appendix 3: Total survey results for the complete results.



Question number 4 gives a very clear result. A majority of the respondents answered 'yes' to this question, more than 68% of the respondents has some knowledge about the existence of mental health problems among seafarers.

At question number 6 most of the respondents, almost 66%, answered 'no' to this question. Most of the respondents have never been depressed on board a ship. But on the other hand more than 34% of the respondents have been depressed on board.

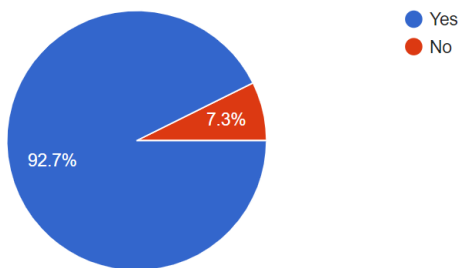


The answers to question number 8 are similar to the results from question number 6. More than 63% of the respondents answered 'no', which indicates that a majority has never seen somebody dealing with depressions on board. But still almost 37% answered 'yes'.

The result of question number 9 is almost 50/50 divided. A little more than half of the respondent will ask for help when suffering from mental illness but almost half of the respondents will not ask for help.

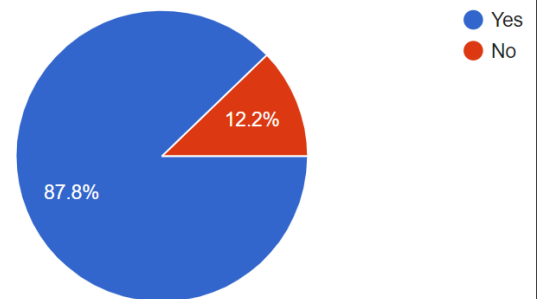
12. Do you think that fitness and sports will help to improve your mental health on board?

41 responses



21. Do you get at least 7 hours of sleep every day?

41 responses

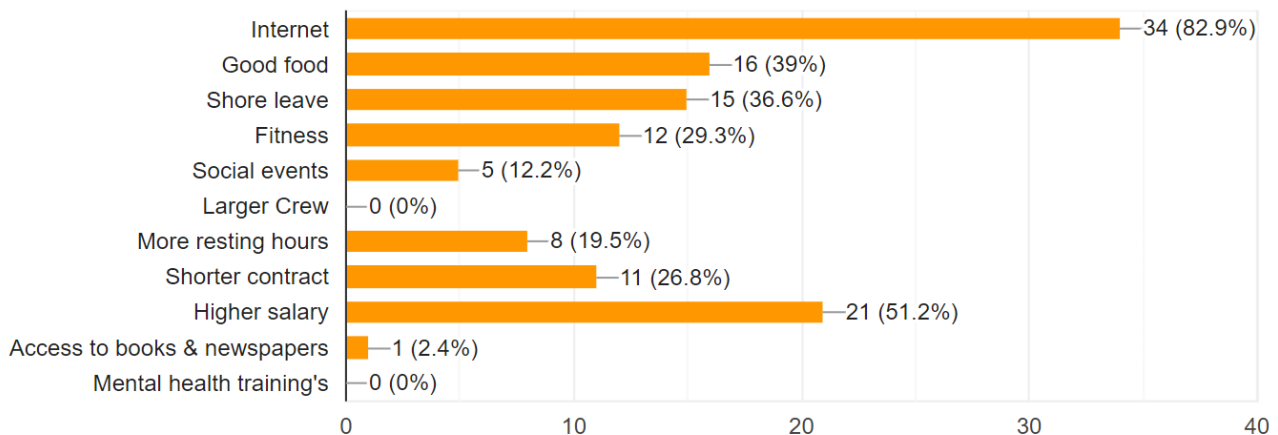


The result of question number 12 gives a very clear result to one specific side. Almost 93% of the respondents think that fitness and sports help to improve your mental health on board a ship. Only 7% answered 'no' to this question, these respondents think sport will not improve the mental state.

Also at question number 21 the result is very clear. Almost 88% of the respondents say that they have at least 7 hours of sleep every day, while only 12% are saying they have not this much.

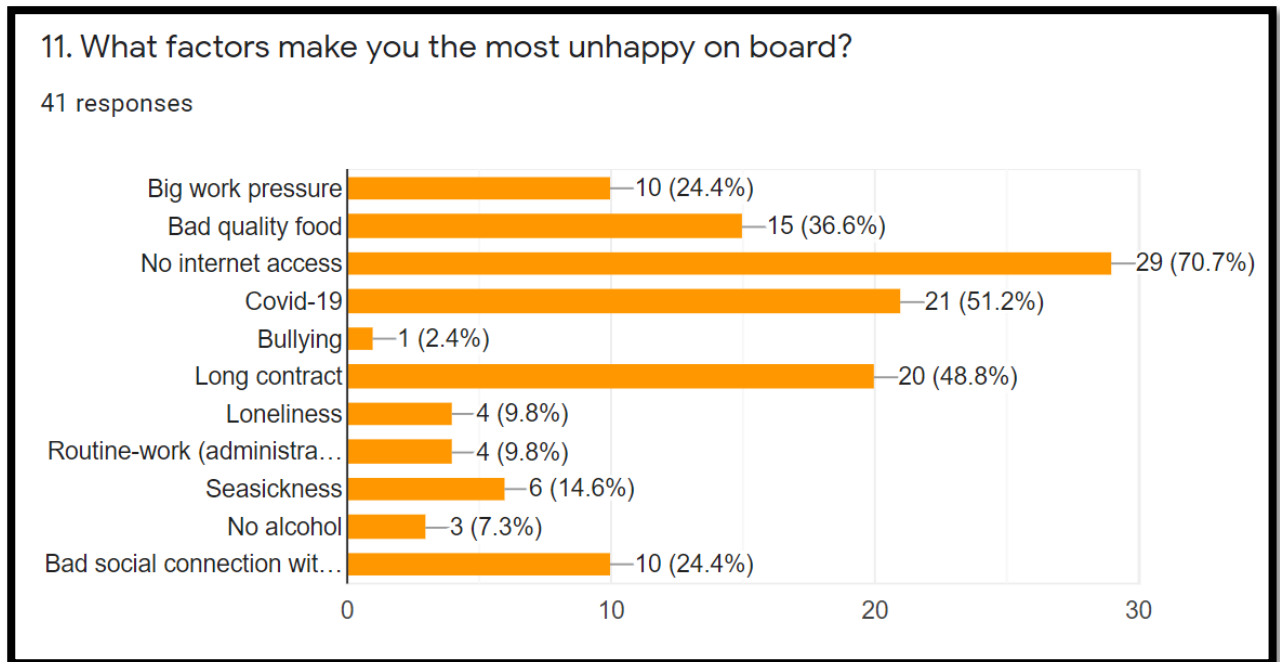
10. What factors make you the most happy on board?

41 responses



When looking at the results of question number 10, the following ranking can be made. The top 4 answers to this question are:

1. Internet;
2. Higher salary;
3. Good food;
4. Shore leave;

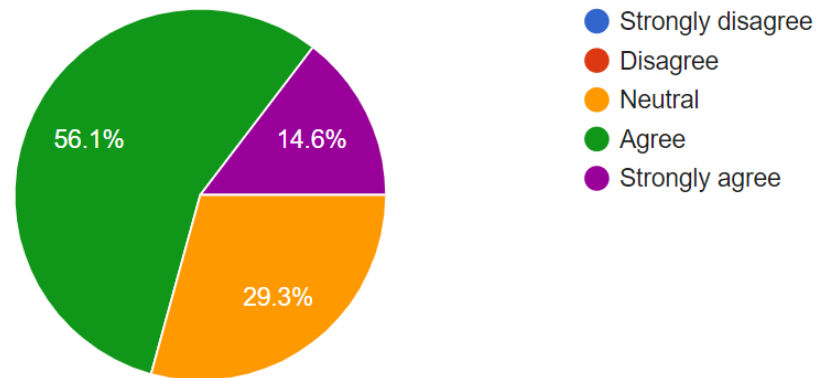


Also for question number 11, a clear selection can be made for the most popular answers. The top 4 answers to this question are:

1. No internet access;
2. Covid-19;
3. Long contract;
4. Bad quality food;

24. Social interaction on board is really important to my mental health.

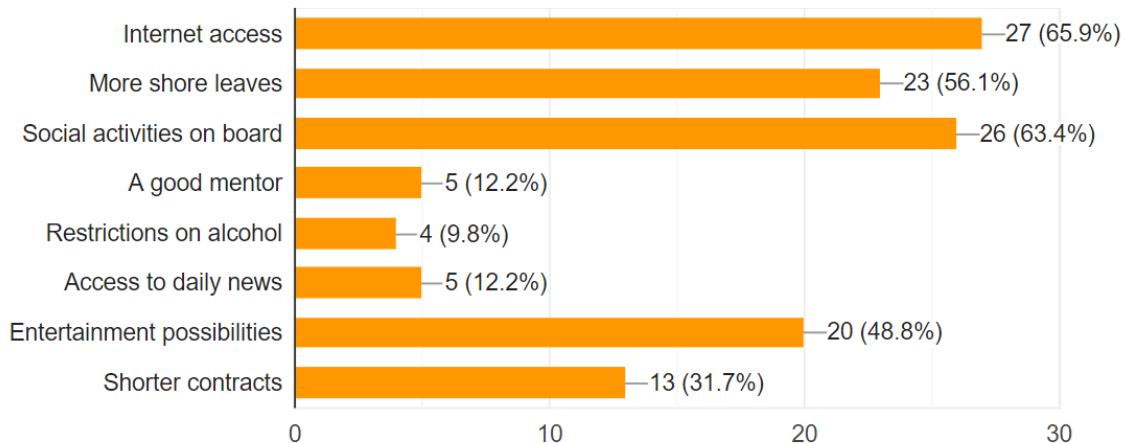
41 responses



Looking at question number 24, more than 56% of the respondents agree with this statement. And even more than 14% do strongly agree with it. But almost 30% of the respondents feel neutral about the statement.

25. How can social isolation being prevented on board?

41 responses

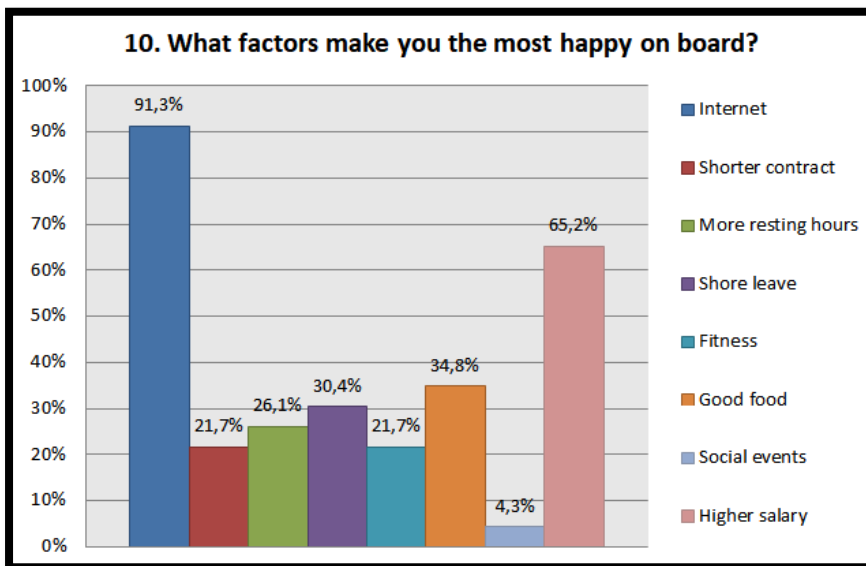


The results of question number 25 are as follows. A top 4 can be seen from this diagram image. The four most popular answers are:

1. Internet access;
2. Social activities on board;
3. More shore leaves;
4. Entertainment possibilities;

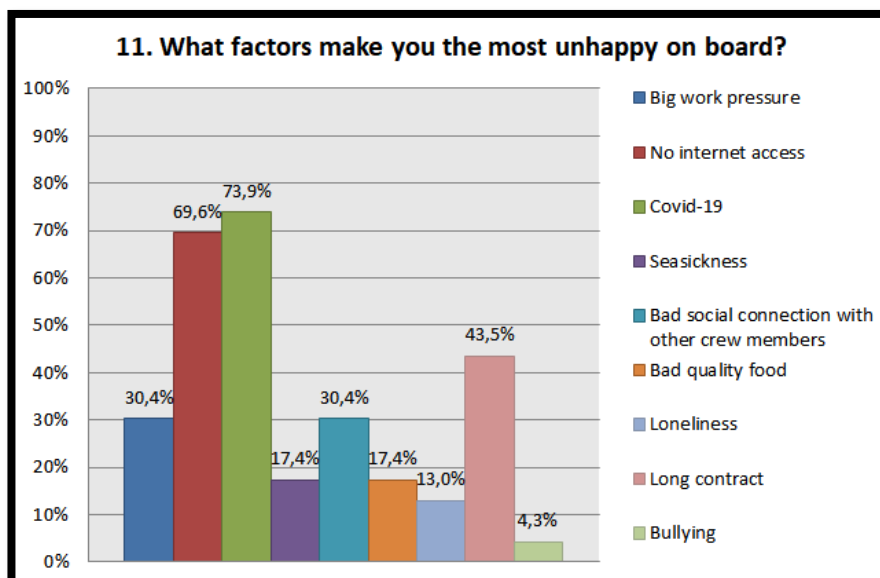
4.2 Results ratings only

In this sub-chapter the results of 23 ratings are shown by use of these two diagrams. The results are presented through two questions which were included in the survey.



The results of question number 10 are shown in the above presented diagram. The top 4 answers to this question are:

1. Internet;
2. Higher salary;
3. Good food;
4. Shore leave;

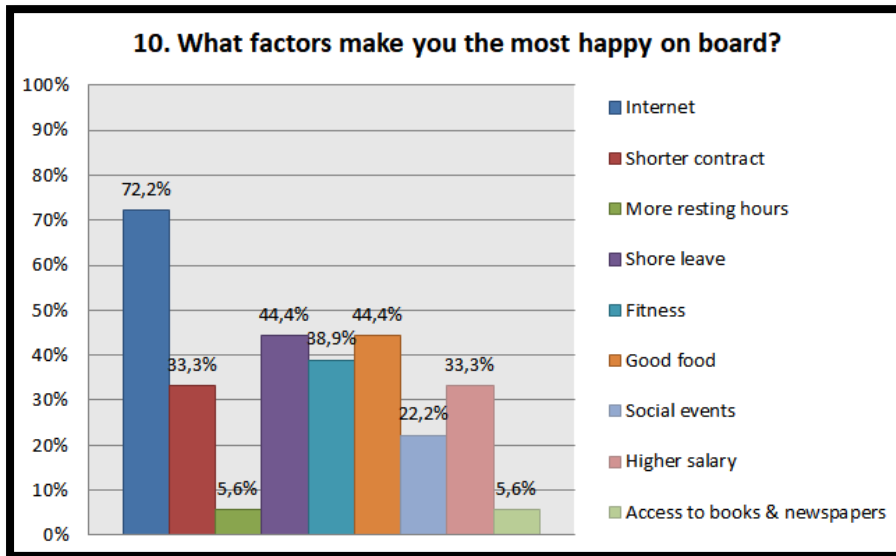


For question number 11 the results are as follows. The top 4 of answers on this question is:

1. Covid-19;
2. No internet access;
3. Long contract;
4. Bad social connection with other crew members & big work pressure;

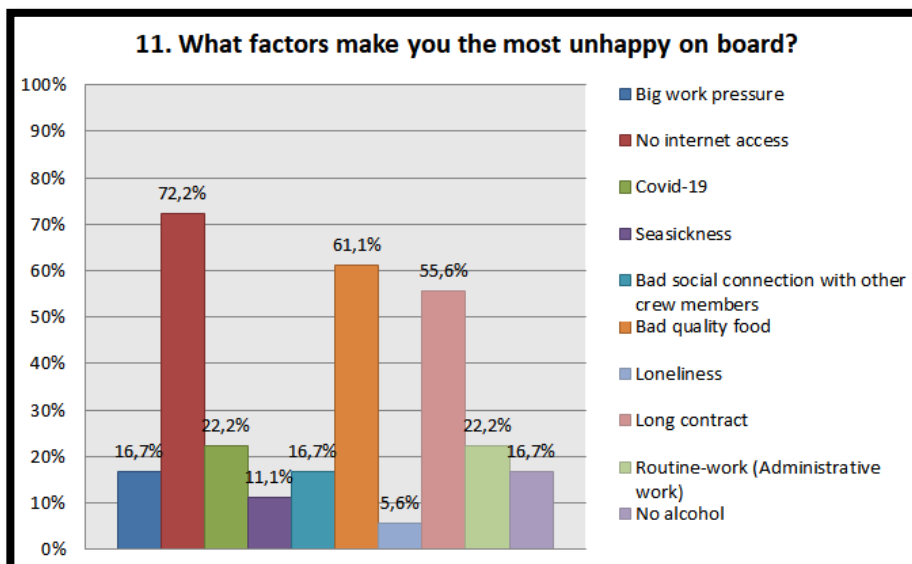
4.3 Results officers & engineers only

In this sub-chapter the results of 18 officers/engineers are shown by use of these two diagrams. The results are presented through two questions which were included in the survey.



Looking at the result of question number 10 from officers and engineers, the following can be noticed. The top 4 of answers to this question is:

1. Internet;
2. Good food;
3. Shore leave;
4. Fitness;

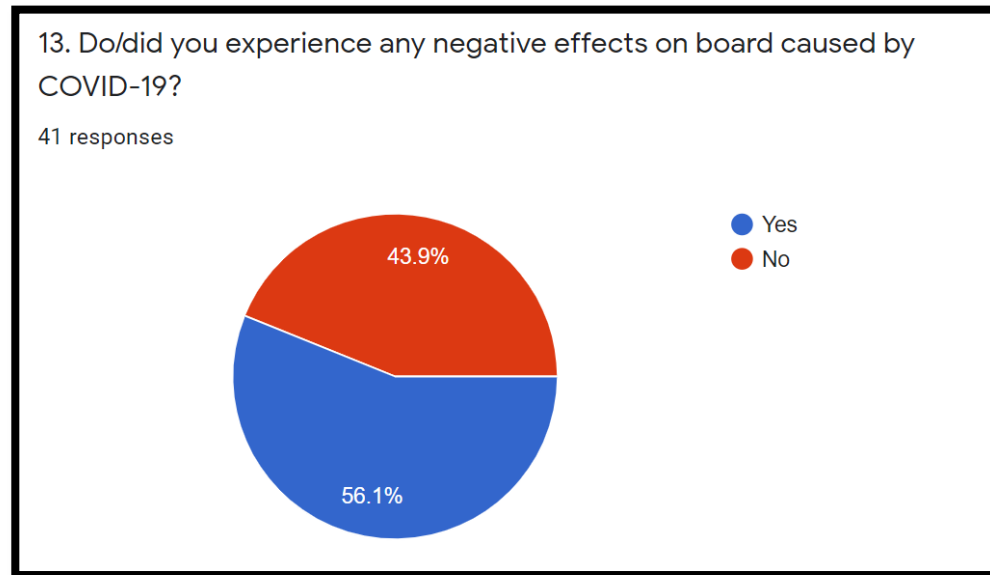


The result of the answers from the officers and engineers to question number 11 is as follows. The top 4 of answers to this question is:

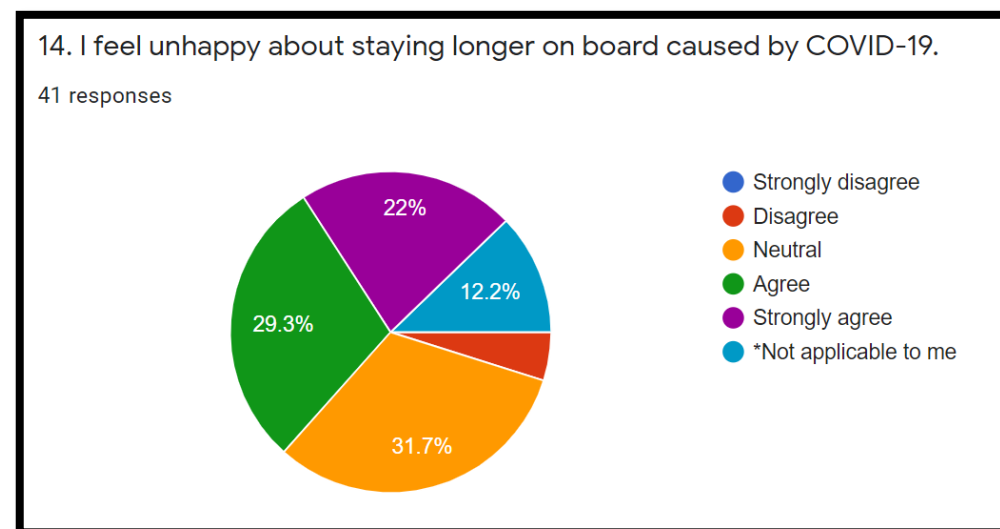
1. No internet access;
2. Bad quality food;
3. Long contract;
4. Covid-19 & Routine-work;

4.4 Results Covid-19 statements

In this sub-chapter the results of the Covid-19 statements will be shown. These results are from the officers/engineers and ratings combined. The results are presented through various diagrams from several questions asked in the survey.



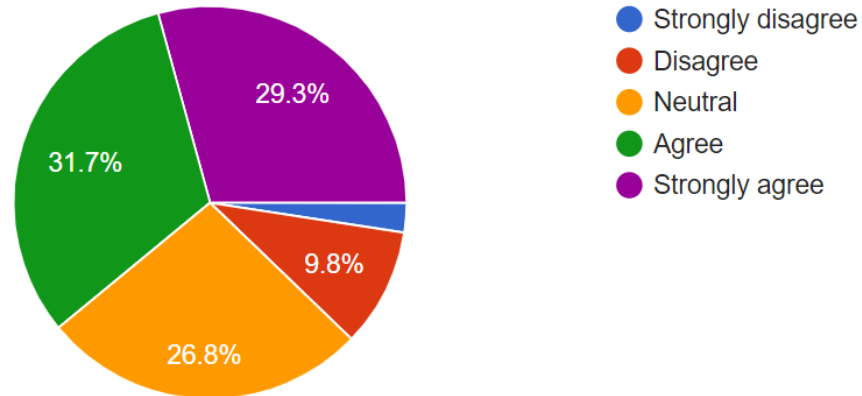
The result of statement number 13 is almost 50/50. A little more than 56% of the respondents answered 'yes' to this statement and almost 44% answered with 'no'.



For statement number 14 the results are divers. Almost 32% of the respondents feel neutral about this statement, more than 29% agree with the statement and even 22% strongly agree with it.

15. I am scared to get infected with COVID-19.

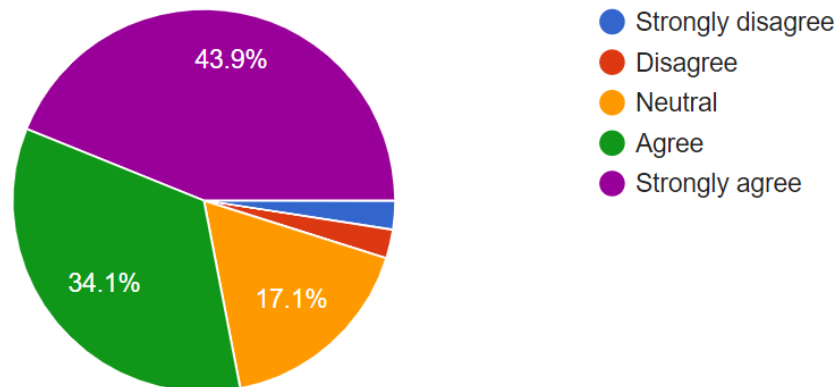
41 responses



The result of statement number 15 is almost the same as statement number 14. Almost 27% of the respondents feel neutral about this statement, more than 31% agree and 29% strongly agree with this statement.

16. I am scared that my family gets infected with COVID-19 during my absence.

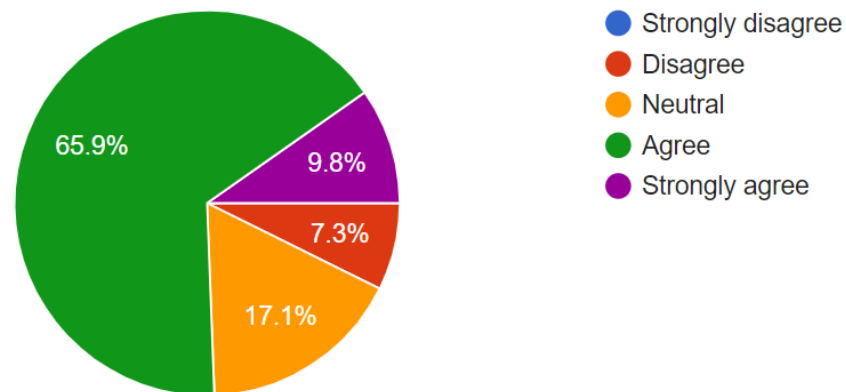
41 responses



To statement number 16 the results are as follows. Almost 44% of the respondents strongly agree with the statement, more than 34% agree and 17% feel neutral about this statement.

17. The Covid-19 precautions on board are sufficient.

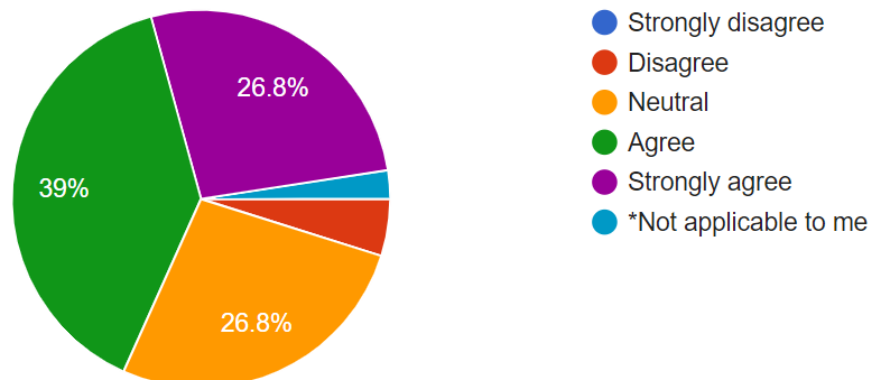
41 responses



Statement number 17 has the following as result. Almost 66% of the respondents agree with the above shown statement, almost 10% strongly agree and 17% feel neutral about it.

18. I feel unhappy about not being able to go ashore caused by the Covid-19 pandemic.

41 responses



The result of statement number 18 is presented in the above shown diagram. Here can be seen that almost 27% of the respondents strongly agree with statement 18 and 39% agree with the statement, while almost 27% feel neutral about it.

5. Discussion

5.1 Validity survey questions

After analysing and reviewing the results, some questions did not meet the expectations. For these questions this resulted in an inaccurate and/or unreliable outcome. This situation is applicable to the following questions:

- **Question number 6: “Have you ever been depressed on board a ship?”**
The main purpose of this question was to get an indication of how big the problems, regarding mental health issues among seafarers, really are.

If for example 2/3 of the respondents would have answered ‘yes’ to this questions, probably the conclusion can be made that there are a lot more seafarers dealing with depressions right now. With these numbers the figures received by desk-research could have been validated.

But the main question here is, to what extent is a seafarer able to determine if depression is the case. Maybe the seafarer has just suffered a couple of times unhappy moments or burn-outs, these are in fact not necessarily depressions. Only a real phycologist can determine if a person is dealing with depressions or other issues like post-traumatic stress disorders. Because it is unknown if the respondents’ answers are based on conclusions made by the seafarer or made by a phycologist, the results of this question can deviate from the reality. So this possible lack of self-knowledge could have some influence on the final results.

- **Question number 9: “Would you ask for help when you suffer from mental illness or depressions on board?”**
The purpose of this question was to determine if asking for help, when dealing with mental issues, is a problem on board.

According to information obtained by desk-research, there is still a big stigma on mental health issues on board of ships. The results of this question would be helpful to verify this information. But is a person able to determine for itself if asking for help, while dealing with mental health problems, would be something he or she would have done in a situation like this? When a person has never been depressed, how can this person know how his reaction will be in a situation as described here above?

Every answer which is given to this question is based on the thoughts at the moment of completing the survey. It is unknown if the respondents will really act according to the answers given to this question when these people are actually suffering from depressions. Nevertheless, the results of this question still give an indication of the current stigma on mental health issues.

- **Question number 10: “What factors make you the most happy on board?”**
The aim of this question was to get a view on what things makes seafarers most happy while being on board.

When answering questions like this people mostly concentrated on the things which are

not (always) available. When something is already always available on board, it will be experienced as normal by the most people. The effect of this is that people are tend to be more focussing on things they have not (yet).

The right answer to this question depend on a lot of factors. These factors could be:

- **The current facilities on board;**
When asking the same question to another vessel from another shipping company, where possibly other living conditions exists, some difference in results can be expected.
- **Personal preferences;**
Every person is different, thinks different and thus has personal preferences. But in real life people are tended to look at others, so if for example seven people before you answered 'good food' then most people are willing to answer the same. Of course can be expected that not all people act like this, obviously some people will have other preferences and other opinions. So in the end the result is possibly a mix of these two elements.
- **Nationality;**
Living standards can be different between nationalities and since on board of ships a lot of people from different nations work together, it can be expected that different answer are likely to be given to question number 10.
- **Age;**
Of course not everyone on board is from the same age. Everyone on board is in a different stage of their lives, which could influence thoughts and preferences. For example, older people may find internet access less important than younger crew members do.

➤ **Question number 11: "What factors make you the most unhappy on board?"**

The main purpose of this question was to get a view on what things makes seafarers most unhappy while being on board.

Also the answers to this question are partly dependant on the presence or absence of the mentioned conditions in the provided answer possibilities. For example, looking at the total results to this question it can be noticed that 'Loneliness' has only been chosen 4 times. Compared to all the other answer possibilities this is quite low, but it does not necessary mean that 'Loneliness' does not make seafarers unhappy. People can only make judgements based on own experiences. If a lot of the respondents have not experienced any 'Loneliness' yet, it can be expected that most of them will probably not choose this as an answer. This also applies to 'Bullying', this answer has been chosen even less. This can mean that most of the respondents have no experience yet with bullying on board.

5.2 General reliability of the survey

Looking at the statistics of the survey, a number of 41 respondents have participated in this survey. Compared to the amount of 63 respondents the researcher desired to have, the final

result is significantly less. This relatively low response has some effect on the reliability of the survey results. Especially to the questions which give a result of how much people have been dealing with mental problems or seen someone with these issues. These kind of results require a big number of respondents, otherwise hard conclusions cannot be made. Nevertheless, with this amount of respondents the result still gives a good indication of the current situation on board regarding these matters.

5.2.1 Reliability survey questions

After analysing and reviewing the results, some questions did not meet the expectations. For some of these questions it resulted in an inaccurate and/or unreliable outcome. This situation is applicable to the following questions:

➤ **Question number 1: “What is your age?”**

The purpose of this question was to create a general view of the difference in answers between ‘elderly’ (35- 60) and ‘young’ people (20-35). Sources have proved that young people are more prone to developing depression (Joostensz, 2018).

After analysing the results of this specific question, the final result did not meet the expectations. The age of the respondents are not so divers as expected, most of the respondents belong to the category ‘young’ and the minority are the ‘elderly’. Because there is such a difference in numbers between the two categories, it is not possible to make reliable view of the differences between the two groups.

➤ **Question number 2: “What type of vessel are you currently working on?”**

Traumatic accidents and situations can be a factor in creating mental issues like depressions. Since sailing in the territorial waters of West-African countries brings a high risk of piracy and armed robberies, it can be very stressful and/or traumatic for seafarers when experiencing these kind of threats. Even the risk of these dangerous situations can be enough for some people to develop mental issues.

The main purpose of this question was to create a general view of the difference in answers between seafarers who are sailing on container ships or who are working on reefer ships.

At Seatrade a lot of reefer ships are sailing to dangerous areas like West-Africa. Seatrade’s colour class fleet (container ships) operate on a fixed line schedule between Europe, United State of America and Australia. Based on this information a difference in answers could be expected. Unfortunately only one respondent working on a reefer ship has completed the survey, to make a reliable comparison more response from crewmembers of reefer ships is essential. Therefore it is impossible to attract conclusions from question number 2.

5.3 Verification of received data

The received data has not been analysed and validated by a specialized psychologist. Since the researcher is not authorised to work as a psychologist, the results from this research can only be used for indicating purposes.

6. Conclusion

In this chapter at first the three sub-questions have been answered by the researcher, following the main-question of this research has been answered by the results from the sub-questions. All of these answers contribute to make an advisory report/recommendations.

6.1 Sub-question 1: What factors contribute to creating mental issues?

When looking at different articles, research reports and other theoretical sources about mental issues, it can be noticed that the development of mental issues is most of the times caused by a combination of a significant amount of factors.

This research shows that, according to its respondents, the following factors are the most contributing to the development of mental issues among seafarers. Generally most of the factors can be divided into two main subjects, social isolation and COVID-19.

- Social isolation:
 - Long contract;
 - Restricted internet access;
 - Bad social connection with other crew members;
- COVID-19:
 - Social isolation (Longer contract)
 - Fear of the virus (family & yourself)
 - Social isolation (No shore leave)

When looking closer at the results of the ratings, the COVID-19 pandemic is a big factor concerning creating depressions. As much as 74% said that the COVID-19 pandemic makes ratings on board the most unhappy. Furthermore, also social isolation is a big factor inside this maritime group. Regarding this topic, long contracts and restricted internet access are the biggest factors what makes ratings most unhappy on board.

- Social isolation;
 - Long contract;
 - Restricted internet access;
 - COVID-19: 73.9%;

Looking at the literature, several studies have shown that also these mentioned factor can have an effect on the seafarers mental state. Long contracts can result in massive isolation from family and friends at home, which can negatively affect the seafarers' mood. In combination with extra uncomfortable factors like restricted internet access and the current COVID-19 pandemic, the seafarer can end up in a depression.

Officers & engineers also consider long contracts and restricted access to internet to be something very dislikeable. But the difference compared to the ratings is that officers/engineers find it more important to have good quality food on board. If there is no good quality food, this group of people will feel more unhappy while being on board.

- Social isolation;
 - Long contract;
 - Restricted internet access;
 - COVID-19: 22.2%;

- Bad quality food;

This difference in results between Ratings and Officers concerning COVID-19 may be caused by the difference in culture and living conditions between various countries. Ratings are most of the time of an Asian nationality like Philippines or Indonesia. In these countries health care and the accessibility to COVID-19 vaccines is not always as good as it is in European countries, fear of getting COVID-19 can be higher. This could be the explanation why ratings dislike this COVID-19 pandemic even more than officers/engineers do.

6.2 Sub-question 2: What can people do themselves to be mentally healthy?

There are several things people can do themselves to improve mental health. At first, doing sports like fitness exercises can be very good and productive for a healthy mind. According to the results of this research there seems to be quite some support for it from seafarers working in the merchant marine, almost 93% of the respondents think that sports and fitness can improve the mental state of seafarers.

Social activities on board seem to be also important to seafarers regarding mental health. A bad social connection with other crew members can result in social isolation and very less social contact with other people seems to be something that seafarers do not like. More than 63% of the respondents think that social activities can prevent social isolation on board.

Another important measure that could be taken by the seafarer is asking for help. Asking for help can be to a good friend, but going to a psychologist or participating in a mental health program are also good options. According to the results of this research more than 58% of the respondents would ask for help when suffering from mental illness like depressions. A little more than half of the respondents would ask for help in these kind of situations, this means that the other half would not ask for help. An explanation for this is probably the high stigma in the maritime world on these kind of problems. On board of ships it is still a manly world, in general it is normal culture that men should not show much emotions, should always be tough and strong while not showing weaknesses. Mental health is assumed to be a weakness and because of this it could be possible that large number of (male) seafarers do not dare to come public with it.

A possible solution for seafarers with mental health issues is to go to a psychologist to take part in mental health therapy sessions. But according to the results of this research only half of the respondents would be accepting help from others.

6.3 Sub-question 3: What measures should be taken by the IMO, ILO and shipping companies to protect seafarers from mental issues?

More detailed requirements regarding food quality; (MLC)

Looking at the results of this survey there can be seen that in general, almost 40% of the respondents, seafarers are more happy when good food is available while being on board. When dividing these results into the answers from officers/engineers and ratings, a difference can be noticed. More than 61% of the officers feel unhappy on board when the food quality is bad, while only 17% of the ratings feel unhappy about this. When looking at the MLC requirements regarding food quality, it is not very detailed described. No quality values have been mentioned, nor the minimum amount of calories for each person per day. And the most important thing to notice here is that the amount of calories has influence on the energy level of a person which can (partly) determine the seafarer's mood.

Requirements regarding fitness & sports facilities on board; (MLC)

Several studies have shown that sports and fitness have a positive influence on the mental health, therefore it is very important to have these kind of facilities on board. The results of this research have shown that almost 93% of the respondents also think that sports and fitness are important to someone's mental health. Because of its importance, some regulations should be made regarding fitness and sports on board of ships. Every seafarers in the world should be able to have access to some kind of sports while being on board. These requirements can be developed and written inside the MLC.

Satellite internet (WIFI) facilities on board for all ships doing ocean voyages; (MLC)

Internet became in the last 20 years an important thing in people's lives. For seafarers internet may be more important than for others, because to stay in touch with family and friends internet access is essential. The results from this research show that almost 83% of the respondents feel happy when internet access on board is available. Ships that make long voyages and cross oceans should have some kind of internet facilities on board in order to make life on board for most seafarers more convenient, this can potentially make a major contribution to a healthy mind for a lot of seafarers.

Contract shortening possibilities on request;

These days there are still a lot of seafarers who have long contracts, the duration of contracts for ratings lie normally around the 7 to 9 months and for non-European officers/engineers this is mostly around 4 to 6 months. Almost 49% of the respondents mentioned 'long contracts' to be the most unhappy factor on board. Due to the COVID-19 pandemic colleagues became sick and/or because of worldwide travelling restrictions signing off became difficult, as a result contracts were extended with 1 to 2 months. More than 50% of the respondents in this research answered 'agree' or 'strongly agree' to the question: *I feel unhappy about staying longer on board caused by COVID-19*. A lot of seafarers do not like to stay longer on board than their original contract length, because family and friends have to be missed longer. Because long contracts can contribute to a bad mental health it should be made possible for seafarers to shorten contracts on request.

A better Pandemic response plan; (more internet, more salary)

Looking at the current COVID-19 pandemic seafarers are facing a lot of difficulties and inconvenient circumstances, like no shore leave, extended contracts, additional COVID-19 rules and extra health care costs of sick family members. Because of these inconvenient situations seafarers should be met with more privileges, like more internet access on board (e.g. instead of 500 MB seafarers get 2000 MB internet every month) and/or more salary as long as a certain pandemic lasts.

6.4 Main question: How can depressions among seafarers on board merchant vessels be reduced within 5 years from now?

Eventually, a lot of answers come down to one thing, prevention of social isolation. This means access to internet, shorter contracts, entertainment possibilities and shore leave are the main elements which are important to seafarers regarding life on board. With the right changes in on

board facilities, company policies and mental health training/treatment programs (e.g. possibilities to assess a mental health coach/psychologist) depressions among seafarers may be reduced and/or treated.

In addition to this, sports and fitness possibilities on board seem to be appreciated by seafarers. A majority of the respondents think that sports can help to improve mental health, which will make quality of life on board better. Additional regulations regarding sports and fitness possibilities on board of ships are necessary.

The results have shown that good quality of food is important to most of the respondents, but officers and engineers consider good food more important than ratings do. Several discussions with various crew members on board have proven that good food on board is important to the persons mood. To get a more detailed view on the minimum quality food must have on board, MLC regulations regarding this topic must be added and/or adjusted.

7. Advisory report/recommendations

7.1 Recommendations for shipping companies

- Discuss mental issues on board so that stigma among seafarers regarding these problems will reduce. This can be done to instruct masters to do frequent meetings with crewmembers to discuss these problems with others to see what others opinions are, this will result in more awareness about mental health problems among the crew on board. Shipping companies can also inform their crew members with information about this subject via social media, flyers or informative books.
- Create mental health programs and procedures. Make it possible for every seafarer inside the company to have access to a confidant and a phycologist. This confidant can be the master or another designated person on board. A phycologist can be hired by the shipping company to provide services to the seafarers who ask for it.
- Make it possible for seafarers to have access to sports and fitness activities. This can be achieved through different ways. A gym area can be created, the general recreation room can be equipped with several fitness attributes or general fitness attributes can be made available for seafarers to take to their cabins to do some exercising in their free time.
- Access to internet on board the ship is very important to seafarers. Shipping companies should make any arrangements regarding internet access. For example, on board satellite WIFI, providing local sim cards or an on board computer with internet access. Vessels sailing worldwide and doing a lot of ocean crossings is best to be provided with WIFI using the satellite network, since sim cards cannot be used while not near the coast. For coastal vessels the best option may be providing sim cards among the crewmembers. The most common sim cards which can be bought on board are with a 10 to 15 gigabyte capacity and cost normally about 15 to 20 US dollars.
- Seafarers also attach great importance to good quality food. It is recommended to shipping companies to setup standards regarding food quality. In more detail, this can be the amount of calories, the quality of the products and the variation of food during the week.

7.2 Recommendations for seafarers

- Enough exercising is important to maintain a healthy mind. Seafarers have to exercise frequently to stay healthy and to lower the risk of getting in a depression.
- Seafarers should ask for help in time when feeling depressed. This can be done to the designated person or to other persons on board where this person feels most confident with. But asking for help to someone from the shipping company should also be made possible. Since it is a sensitive subject, many people find it difficult to ask a colleague for help, so asking someone unknown ashore can be a good alternative.

7.3 Recommendations for maritime law adjustment

- ❖ About fitness and sports facilities on board, the MLC is saying the following:

“Consideration should also be given to including the following facilities at no cost to the seafarer, where practicable:

(d) sports equipment including exercise equipment, table games and deck games;"

The MLC does not make it mandatory for shipping companies to have any kind of equipment on board regarding sports and fitness, it is only a recommendation to shipping companies but no requirement to have.

Since sport can be very effective for seafarers to maintain a healthy mind, it should be made mandatory by the IMO to have any kind of sports facilities on board of ships accessible for seafarers. The best recommendation could be the following:

"For ships below 3000 GT a gym should be considered by the shipping company, if the ship has no room left to make this possible, some sort of sports equipment should be available to seafarers to use in their own cabin for sports exercising.

For ships above 3000 GT a gym on board is required. The shipping company is obliged to accommodate a gym in a closed and well ventilated room on board the company's fleet."

- ❖ Adjustment of regulations regarding food quality on board. The MLC is saying the following about food on board:

"1. Each Member shall ensure that ships that fly its flag carry on board and serve food and drinking water of appropriate quality, nutritional value and quantity that adequately covers the requirements of the ship and takes into account the differing cultural and religious backgrounds."

Regulations 3.2 is about food and catering, in this whole chapter no concrete details are given about this subject. These regulations are talking about appropriate quality, nutritional value and adequate quantity. What is the appropriate quality? How much nutritional value? What is an adequate quantity? These are all questions which cannot be answered using these MLC regulations.

The quality of food is determined by different factors, the most important factor is the amount of kilocalories. The recommended amount for a male adult is *2000 kcal per day*, seafarers work harder and more than the average person, so the recommendation is to implement a minimum of *2500 kcal per person per day* for seafarers. In addition to this, also enough vitamins should be supplied by the shipping company. To arrange this regulations about supply of fruits have to be implemented. These regulations should contain that *fruits and other vitamin supplies (vitamin pills or bars) should be available every day* for seafarers on board.

Also variety in food is important. To ensure that there is enough variety in food on board the recommendation is to implement regulations in MLC which states that a *minimum of 7 different kind of dishes* should be served on board every week. This means that in one week every day a different kind of dish can be consumed by the seafarer.

- ❖ Adjustment of regulations regarding internet access on board. The MLC is saying the following about internet on board:

"Consideration should also be given to including the following facilities at no cost to the seafarer, where practicable:

(j) reasonable access to ship-to-shore telephone communications, and email and Internet facilities, where available, with any charges for the use of these services being reasonable in amount."

In MLC Guideline B3.1.11 – Recreational facilities, mail and ship visit arrangements the current regulations are only advising the shipping companies to look at the possibilities to arrange any internet access on board. The current regulations do not oblige shipping companies to have these kind of facilities on board for crew members.

To be sure that in the future every seafarer will have access to any kind of internet on board, the regulations should be adjusted to the following. Vessels sailing worldwide and/or doing more than four ocean crossings every year should be provided with WIFI using the satellite network, since sim cards cannot be used while not near the coast. For vessels only doing coastal voyages sim cards should be provided to the seafarers every month.

- ❖ Regulations regarding contract length have to be implemented. The MLC is saying the following about annual leave periods for seafarers:

"Each Member shall require that seafarers employed on ships that fly its flag are given paid annual leave under appropriate conditions, in accordance with the provisions in the Code."

No specific requirements, like minimum or maximum annual leave periods, are given in the MLC regulations. Also about contract length nothing concrete is mentioned about it in this convention. Since contract length seems to be an important factor (especially for ratings) to the seafarers' mental state, it is important to implement some concrete details in the MLC about this subject.

It is recommended to implement a maximum contract length of six months with a minimum rest period of at least half the original contract length. If a seafarer wants to work more than these requirements it should be made possible by the shipping company. In consultation with the seafarer an extended contract can be created.

- ❖ For pandemics like the current COVID-19 pandemic a good response plan should be made available by the shipping company to help seafarers in difficult times. This plan should include the following elements: compensation, extra facilities and internet access.

During times of pandemic seafarers are forced to stay longer on board than usual. This results in more time away from family and friends while social isolation is at risk to occur. Also stress and exhaustion can become a problem for seafarers when being a long time on board. To compensate all of these inconvenient circumstances a bonus should be given to the affected seafarers. It is important that shipping companies implement this in their emergency response

plan and set aside money for this. Seafarers should receive a substantial amount of extra money which is appropriate for the situation at that moment.

During pandemics seafarers can suffer many adverse consequences like restricted shore leave, longer contracts and fear of the situation. To make life on board a little bit more bearable in these kind of situations extra facilities should be made available to the seafarers. Examples of extra facilities can be extra internet capacity, extension of video games collection and extra entertainment possibilities.

Internet access is crucial to seafarers because this is the only way seafarers can have contact with family and friends. In times of pandemic, when shore leave is restricted or not possible, the shipping company should consider to give seafarers more internet access. Therefore in this emergency response plan a well described plan should be included, so that the shipping company has the money and facilities ready to accomplish this in times of need.

References

- Amatenstein, S. LCSW. *Quotes About Depression & What Depression Feels Like*. PSYCOM, New York City.
- Blackburn, P. (2020). *Mentally Healthy Ships*. Croydon: ISWAN.
- Blackburn, P. Step-by-step plan. *Mentally Healthy Ships*. ISWAN, Croydon.
- Drugsinfoteam. (2019). *Alcohol-risico's*. Retrieved from Drugsinfoteam:
<https://www.drugsinfoteam.nl/drugsinfo/alcohol/alcohol-ricos#:~:text=Het%20overmatig%20drinken%20van%20alcohol,dichtslibben%20door%20cholesterol%20kan%20tegengaan>.
- Futureonautics . (2014). *Crew Communication Survey*.
- Harris. We stay on board, you stay at home. *We stay on board, you stay at home*. ITF, London.
- Hebbar, A. A., & Mukesh , N. (2020). *COVID-19 and seafarers' rights to shore leave*. Malmö: Via Medica.
- Helen Sampson, N. E. (2018). *Seafarers' mental health and wellbeing*. Cardiff: Cardiff University.
- Hughes, J. E. (2017). *Caring for Seafarers' Mental Wellbeing*. The American Club.
- Hunterlink. (2015). *What we do*. Retrieved from Hunterlink : <https://hunterlink.org.au/about/>
- IMO. (2006, February 7). Maritime Labour Convention. London, UK.
- ISWAN. (2019). Guidelines for mental care on board Merchant Ships. London, UK.
- ITF. Abandoned at sea in the midst of a pandemic. *Abandoned at sea in the midst of a pandemic*. ITF, London.
- Iversen, R. T. (2012). *The Mental Health of Seafarers*. Melbourne: Via Medica.
- Iversen, R. T. (2012). *The Mental Health of Seafarers*. Melbourne: Via Medica .
- Joostensz, T. (2018, maart 26). *Depressie heeft enorme invloed op het leven van jongeren*. Retrieved augustus 30, 2021, from UMCG:
<https://kennisinzicht.umcg.nl/Paginas/Depressie-heeft-enorme-invloed-op-het-leven-van-jongeren.aspx>
- Kupsch, B. (2003). *Writing Multiple-Choice Questions*. Retrieved from Academic:
<http://academic.son.wisc.edu/wistrec/net/multiplechoicetext.html>
- Lefkowitz, R., & Slade, M. (2019). *Seafarer Mental Health Study*. London : ITF SEAFARERS' TRUST & YALE UNIVERSITY.
- Lucieer, M. (2018). *Psychische problemen? Zo vertel je dat het best op je werk*. Retrieved from Intermediair: <https://www.intermediair.nl/werk-privebalans/stress/psychische-problemen-zo-vertel-je-dat-het-best-op-je-werk?referrer=https%3A%2F%2Fwww.google.nl%2F>

- Mast, B. (2020, juni 23). *Depressed at Sea*. Sweden.
- MoodGYM. (2006). *About moodgym*. Retrieved from moodgym:
<https://moodgym.com.au/info/about>
- Nautilus International. (2019, May 20). *The right to be well – should seafarer wellbeing be enshrined in maritime law?* Retrieved from nautilusint:
<https://www.nautilusint.org/en/news-insight/telegraph/the-right-to-be-well-should-seafarer-wellbeing-be-enshrined-in-maritime-law/>
- Ovcina, J. (2020, July 29). *Seafarer mental health crisis at a tipping point due to COVID-19 impact*. Retrieved from Offshore energy: <https://www.offshore-energy.biz/seafarer-mental-health-crisis-at-a-tipping-point-due-to-covid-19-impact/>
- Pathak, K. (2019, October 24). *Mental health and seafarers: It's time to talk*. Retrieved from GARD: www.gard.no/web/updates/content/28558450/mental-health-and-seafarers-its-time-to-talk
- Pathak, K. (2020, april 23). *Seafarers in a time of pandemic – strategies for maintaining and improving mental wellbeing*. Retrieved november 23 , 2020, from Gard.no:
<http://www.gard.no/web/updates/content/29575007/seafarers-in-a-time-of-pandemic-strategies-for-maintaining-and-improving-mental-wellbeing>
- Rafael Y. Lefkowitz, M. D. (2019). *Seafarer Mental Health Study*. London: ITF SEAFARERS' TRUST & YALE UNIVERSITY.
- Rafael Y. Lefkowitz, M. D. (2019). *Seafarer Mental Health Study*. London: ITF .
- Roasoft Inc. . (2019). *Steekproefcalculator*. Retrieved from Corpus:
<https://www.corpos.nl/producten/Steekproef/steekproefcalculator.html>
- Safety4sea. (2020, january 3). *How to improve the mental health of seafarers*. Retrieved from Safety4sea: <https://safety4sea.com/cm-how-to-improve-the-mental-health-of-seafarers/>
- Sailors' Society . (2014). *Providing a personal lifeline*. Retrieved from Sailors' Society :
<https://www.sailors-society.org/our-work>
- Sampson, H. (2013). *International seafarers and transnationalism in the twenty first century*. Manchester: Manchester University Press.
- SurveyMonkey. (2019). *Meerkeuzevragen: alles wat u moet weten*. Retrieved from Surveymonkey: <https://nl.surveymonkey.com/mp/multiple-choice-questions-everything-you-need-to-know/>
- Swift, O. (2015). *Social Isolation of Seafarers*. Croydon: ISWAN.
- Thomas, A. (2019, february 11). *The Benefits of Running Anonymous Employee Surveys*. Retrieved from Medium: <https://medium.com/management-matters/the-benefits-of-running-anonymous-employee-surveys-abdc02d0bd92>

Togetherall. (2018). *About us*. Retrieved from togetherall: <https://togetherall.com/en-gb/about-us/>

Torres, F. (2020, October). *What Is Depression?* Retrieved from American Psychiatric Association : <https://www.psychiatry.org/patients-families/depression/what-is-depression>

Zero, J. *Depression Is An Ocean*. Medium.

Appendix 1: Hard copy Survey

Version: 2.0 / 30-03-2021

Introduction

Dear Seafarer, my name is Noa Eversdijk and I'm a 4th year nautical student at HZ University of Applied Sciences in Vlissingen (Netherlands). For my graduation project I'm doing research to depressions among seafarers, in this research I'm looking for solutions to these mental problems. To find these solutions I will be analysing the current legislation about this matter and the given answers received via this survey form. This means that your experience and opinions are very important to this research.

The maritime industry can be very tuff, as a seafarer you are frequently for long periods away from home, communication isn't always possible and the work can be very stressful. Several studies have shown that the above mentioned aspects are the main difficulties on board according to seafarers. Especially in these days of pandemic life on board is for seafarers extra tuff, shore leave is mostly not possible, extended contracts and fear of the virus make life on board very difficult.

The survey consists of 26 questions/statements and takes about **10 minutes** to complete, please answer in all honesty.
Thank you in advance and good luck!

To fill in this survey **easy** and **quick** on your smartphone or computer, go to this link in your browser: <https://forms.gle/DBWUibts6ZQtjNof6> or scan the **QR-code**:
OR the questions can be answered through this form.



Privacy statement

- The survey is completely anonymous, do **not** put your name, gender or nationality on the form. Only then your privacy can be guaranteed.
- The results of all surveys will be shared with *HZ University of Applied Sciences*.
- The collected data will be used for educational purposes only.
- By filling in this survey, you agree to the privacy statement.

Question:	Answer: <i>*Circle the right answer</i>
1. What is your age?	
2. What type of vessel are you currently working on?	<input type="radio"/> Reefer <input type="radio"/> Container ship
3. What is your rank?	<input type="radio"/> Ratings <input type="radio"/> Officer/Engineer
4. Have you ever heard about the worldwide problem regarding mental issues among seafarers?	<input type="radio"/> Yes <input type="radio"/> No
5. Have you ever suffered from mental illness (Burn-out) on board a ship?	<input type="radio"/> Yes <input type="radio"/> No
6. Have you ever been depressed on board a ship?	<input type="radio"/> Yes <input type="radio"/> No
7. Have you ever noticed a crew member dealing with mental illness (Burn-out) on board?	<input type="radio"/> Yes

	<input type="radio"/> No
8. Have you ever noticed a crew member dealing with depressions on board?	<input type="radio"/> Yes <input type="radio"/> No
9. Would you ask for help when you suffer from mental illness or depressions on board?	<input type="radio"/> Yes <input type="radio"/> No
10. What factors make you the most happy on board? *Circle 3 options	Internet / Good food / Shore leave / Fitness / Social events / Larger Crew / More resting hours / Shorter contract / Higher salary / Access to books & newspapers / Mental health training's
11. What factors make you the most unhappy on board? *Circle 3 options	Big work pressure / Bad quality food / No internet access / Covid-19 / Bullying / Long contract / Loneliness / Routine-work (administrative work) / Seasickness / No alcohol / Bad social connection with other crew members
12. Do you think that fitness and sports will help to improve your mental health on board?	<input type="radio"/> Yes <input type="radio"/> No
13. Do/did you experience any negative effects on board caused by COVID-19?	<input type="radio"/> Yes <input type="radio"/> No
14. I feel unhappy about staying longer on board caused by COVID-19.	<input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree <input type="radio"/> *Not applicable to me
15. I am scared to get infected with COVID-19.	<input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree
16. I am scared that my family gets infected with COVID-19 during my absence.	<input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree
17. The COVID-19 precautions on board are sufficient.	<input type="radio"/> Strongly disagree

	<input type="radio"/> Disagree <input type="radio"/> Neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree
18. I feel unhappy about not being able to go ashore caused by the Covid-19 pandemic.	<input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree <input type="radio"/> *Not applicable to me
19. I feel appreciated on board by the other crew members.	<input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree
20. Have you ever been intimidated or bullied by a crew member on board?	<input type="radio"/> Yes <input type="radio"/> No
21. Do you get at least 7 hours of sleep every day?	<input type="radio"/> Yes <input type="radio"/> No
22. Do you think that a 'support program' will help seafarers with depressions?	<input type="radio"/> Yes <input type="radio"/> No
23. Are you satisfied with the existing regulations regarding mental health on board of ships?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> I don't know the regulations regarding this subject
24. Social interaction on board is really important to my mental health.	<input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree
25. How can social isolation being prevented on board? *Circle 3 options	Internet access / More shore leaves / Social activities on board / A good mentor / Restrictions on alcohol / Access to daily news / Entertainment possibilities / Shorter contracts

26. Working on board brings me a lot of stress.	<ul style="list-style-type: none"><input type="radio"/> Strongly disagree<input type="radio"/> Disagree<input type="radio"/> Neutral<input type="radio"/> Agree<input type="radio"/> Strongly agree
<p>Thank you for your participation 😊</p> <p>I wish you good health in these difficult times and take care of yourself!</p>	

Appendix 2: Instruction letter Captain

Survey Depressions among seafarers

18 March 2021

Dear Captain,

I'm a cadet on board the vessel Seatrade Blue and during this internship I will be doing a research to depressions on board. This research is the last part of my studies before I graduate as deck officer at the nautical college HZ University of Applied Sciences in Vlissingen (Netherlands). Because of the coronavirus it became more visible that a lot of seafarers worldwide are suffering from mental health problems like depressions. This really shocked me and made me very curious about how these problems has started. By means of this research I want to make a recommendation for shipping companies to make a 'mental health support program'.

To collect the data I need for his, a survey with several questions about this topic will be used. To justify my findings from the surveys I need around 70 to 80 respondents. Since I'm depending on the captain of every vessel for spreading the survey among the crew, is this reason why I'm writing this letter.

General information about the survey:

- The surveys are **completely anonymous**, no personal data is required;
- The survey takes about 10 minutes to complete, questions are mainly about the personal wellbeing and the COVID-19 pandemic;
- A digital variant is also available, the details about this version can be found on the survey itself. The digital variant can be filled in by phone or computer, it creates less paperwork and the results of all surveys come directly to me;
- If the paper version is being used by some crewmembers, I hope there is a possibility to make a spot available where the surveys can be collected in all privacy. Eventually, the paper version of the survey can be collected by the captain and then send to the office, later via the office the surveys will come back to me;

I'm hoping you are willing to help me with my research, it is greatly appreciated.

Yours sincerely,

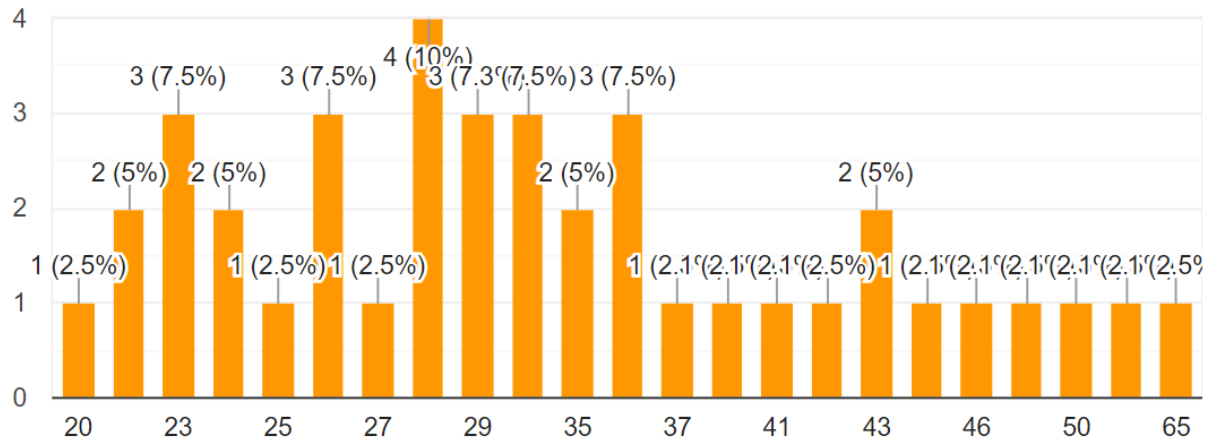


Noa Eversdijk

Appendix 3: Total survey results

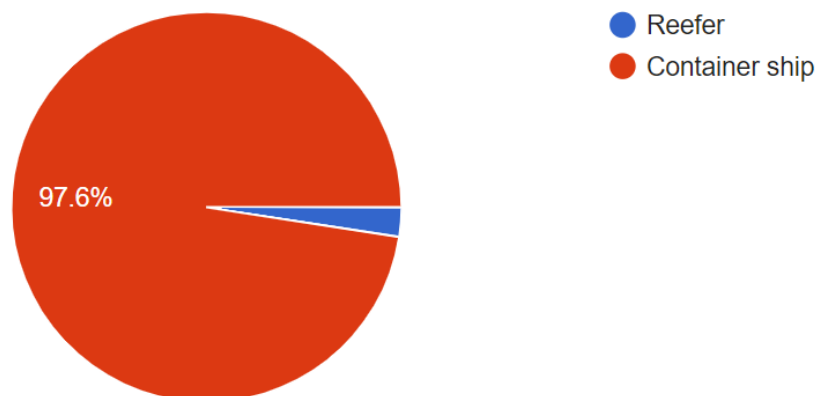
1. What is your age?

40 responses



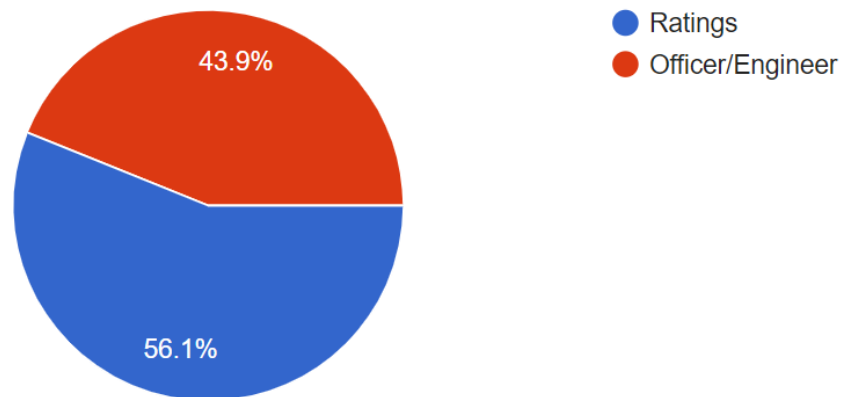
2. What type of vessel are you currently working on?

41 responses



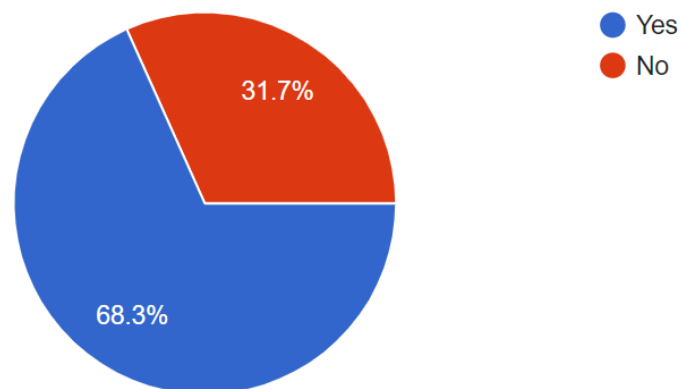
3. What is your rank?

41 responses



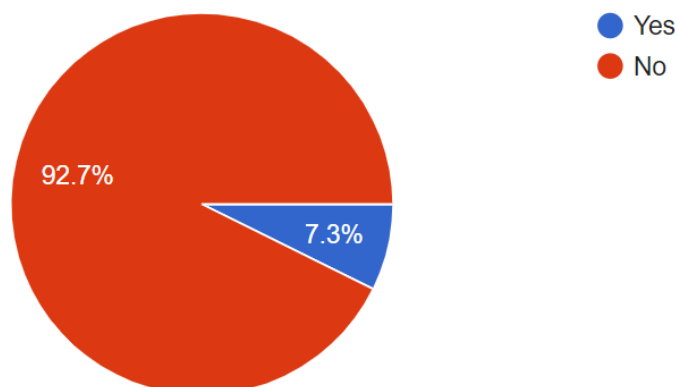
4. Have you ever heard about the worldwide problem regarding mental issues among seafarers?

41 responses



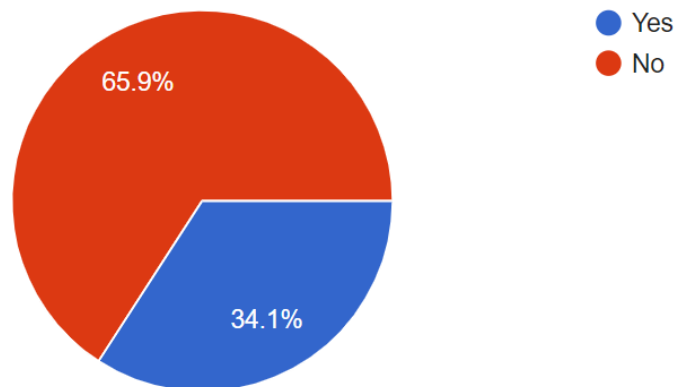
5. Have you ever suffered from mental illness (Burn-out) on board a ship?

41 responses



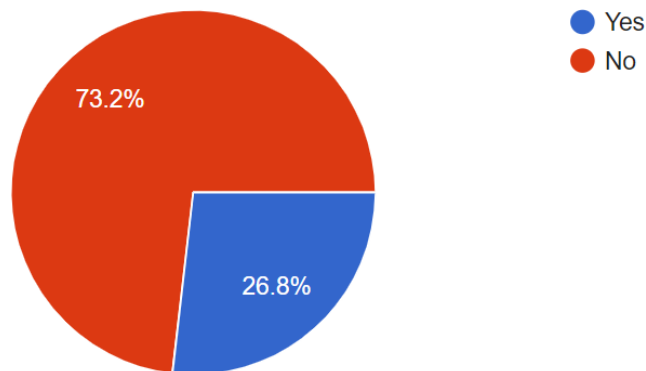
6. Have you ever been depressed on board a ship?

41 responses



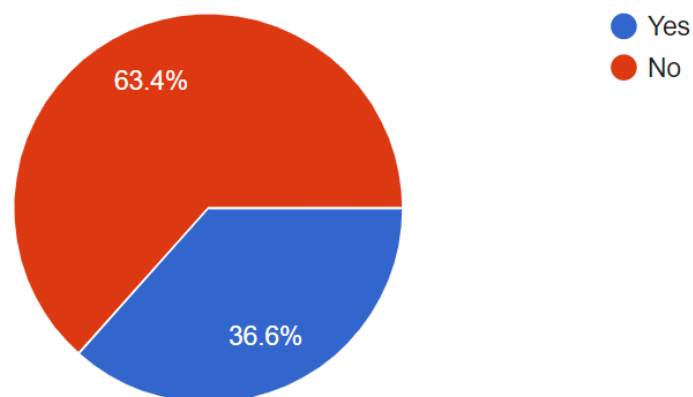
7. Have you ever noticed a crew member dealing with mental illness (Burn-out) on board?

41 responses



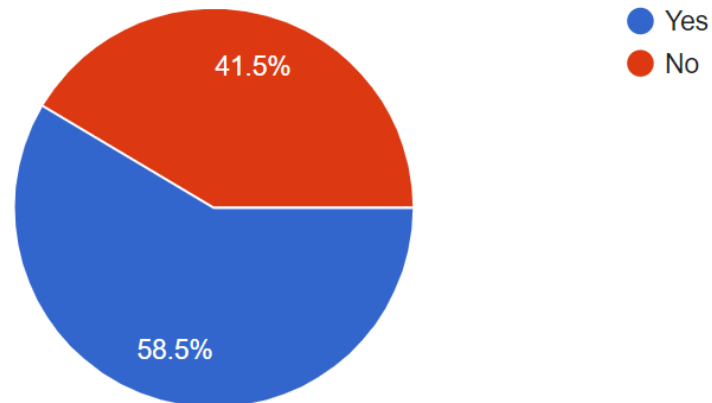
8. Have you ever noticed a crew member dealing with depressions on board?

41 responses



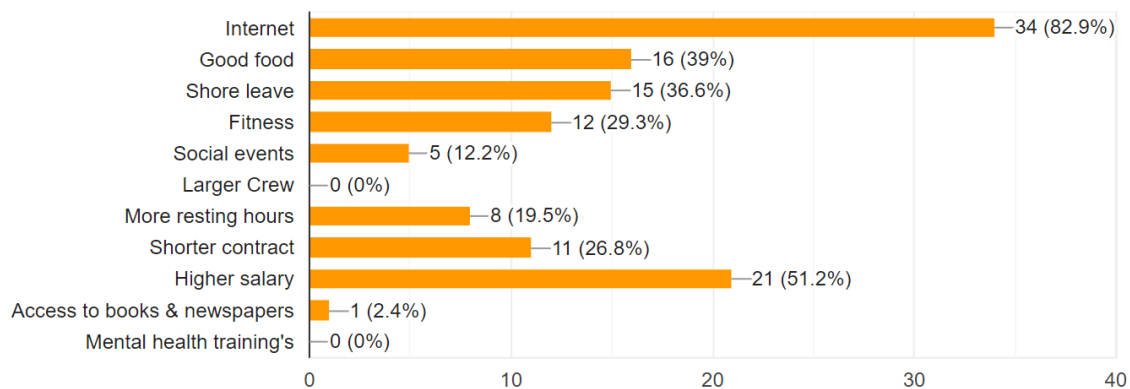
9. Would you ask for help when you suffer from mental illness or depressions on board?

41 responses



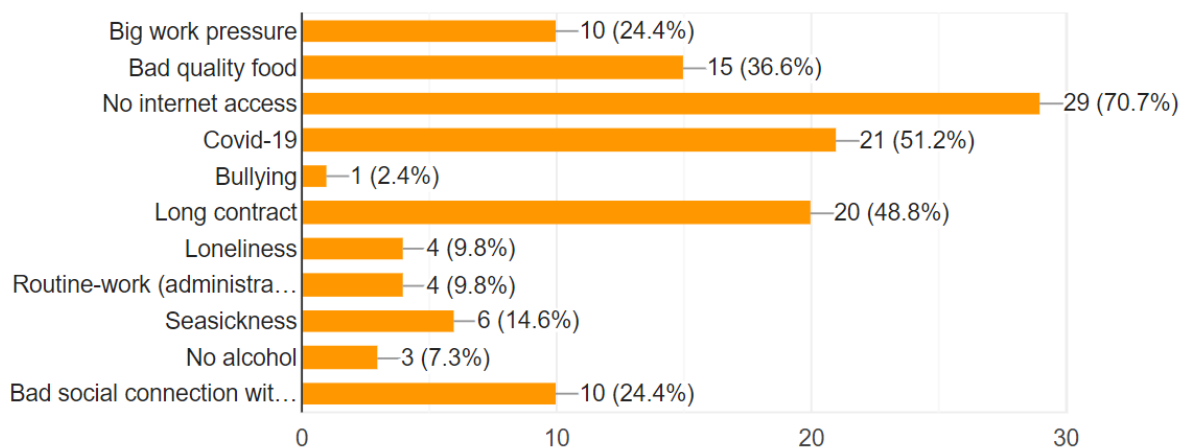
10. What factors make you the most happy on board?

41 responses



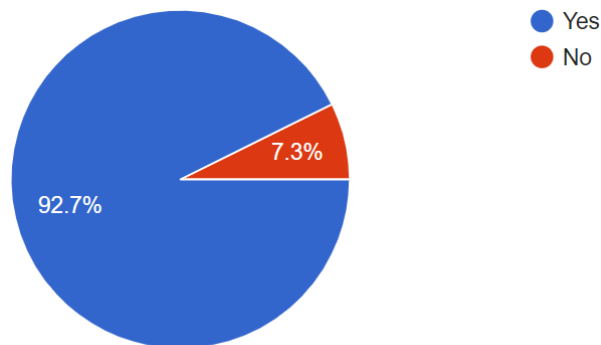
11. What factors make you the most unhappy on board?

41 responses



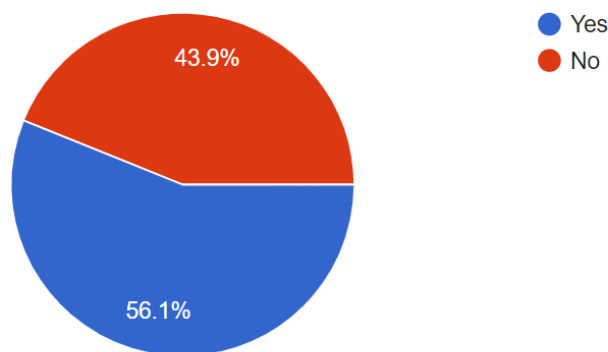
12. Do you think that fitness and sports will help to improve your mental health on board?

41 responses



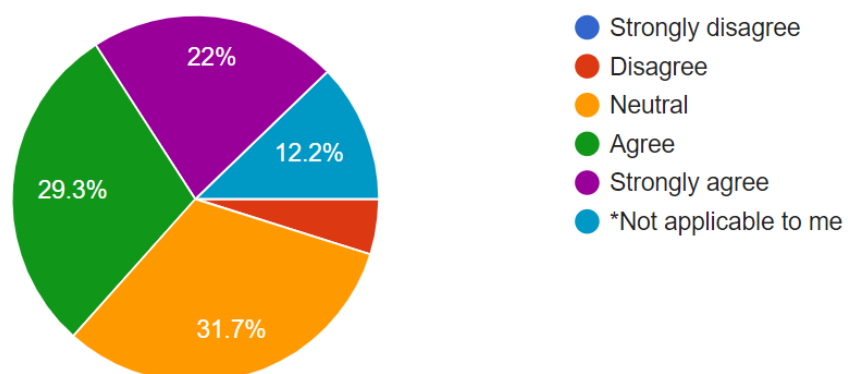
13. Do/did you experience any negative effects on board caused by COVID-19?

41 responses



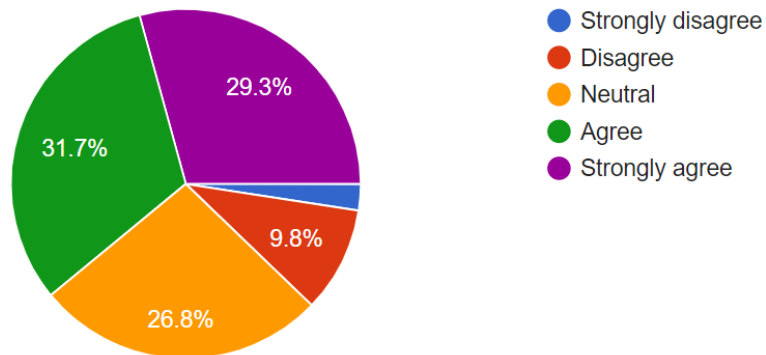
14. I feel unhappy about staying longer on board caused by COVID-19.

41 responses



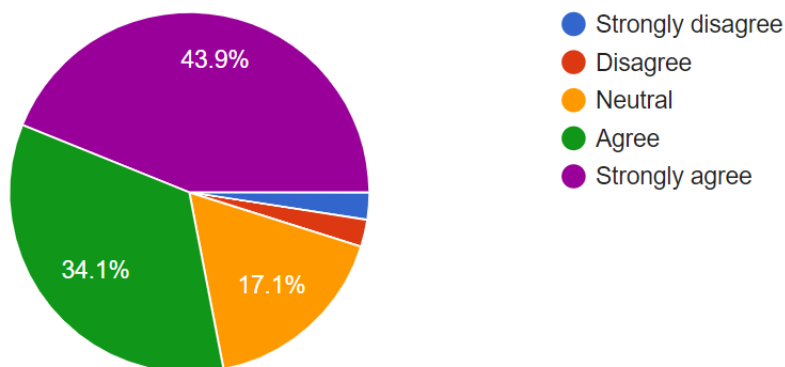
15. I am scared to get infected with COVID-19.

41 responses



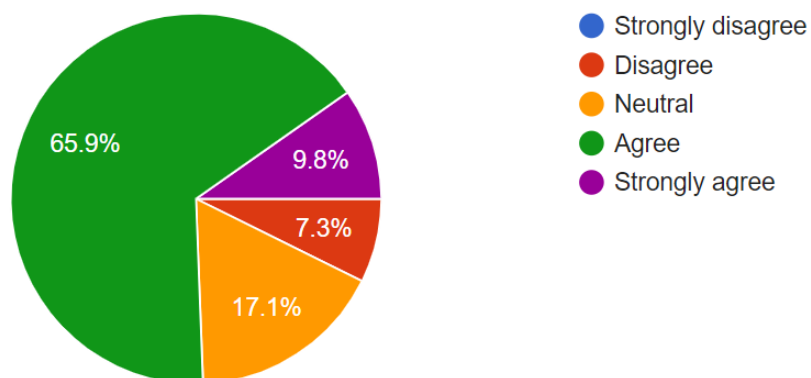
16. I am scared that my family gets infected with COVID-19 during my absence.

41 responses



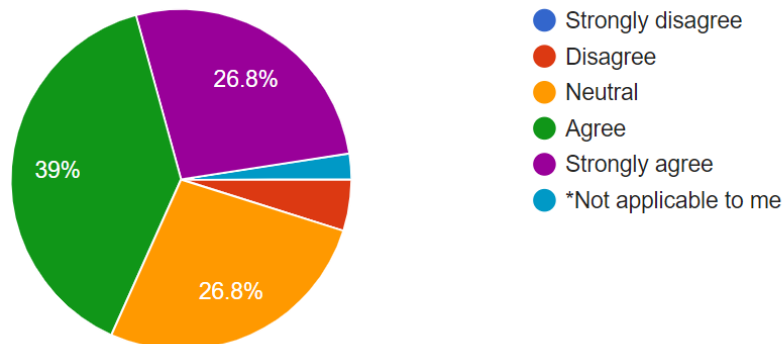
17. The Covid-19 precautions on board are sufficient.

41 responses



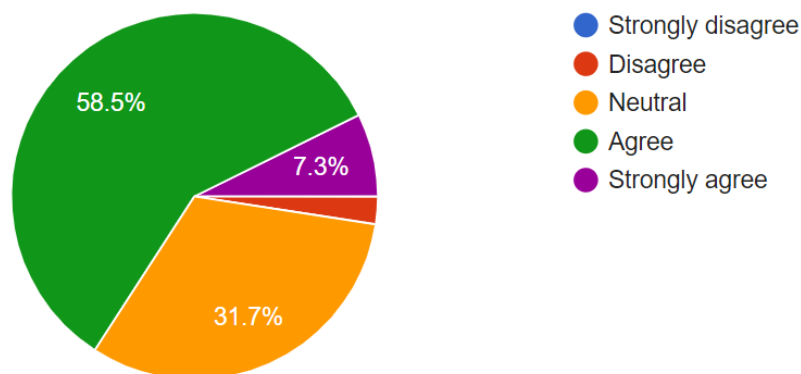
18. I feel unhappy about not being able to go ashore caused by the Covid-19 pandemic.

41 responses



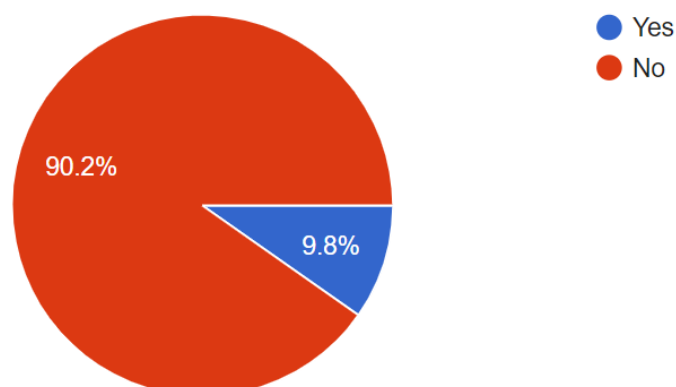
19. I feel appreciated on board by the other crew members.

41 responses



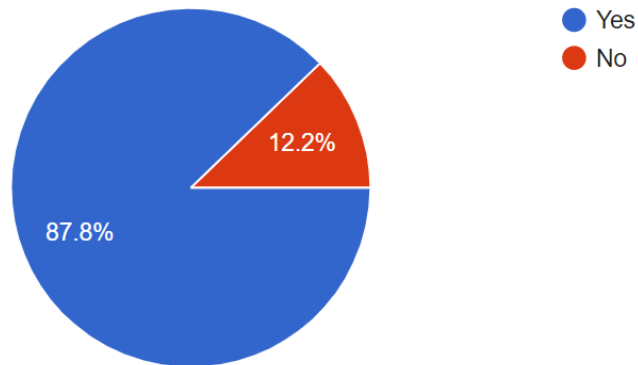
20. Have you ever been intimidated or bullied by a crew member on board?

41 responses



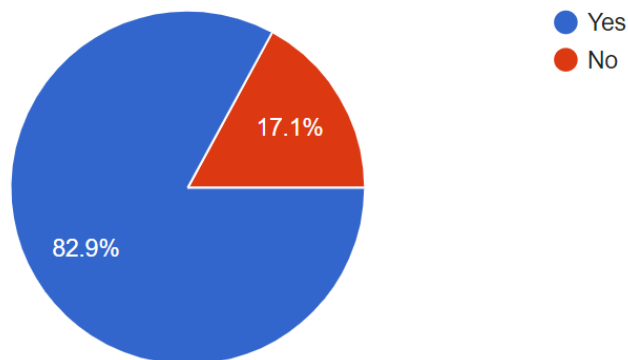
21. Do you get at least 7 hours of sleep every day?

41 responses



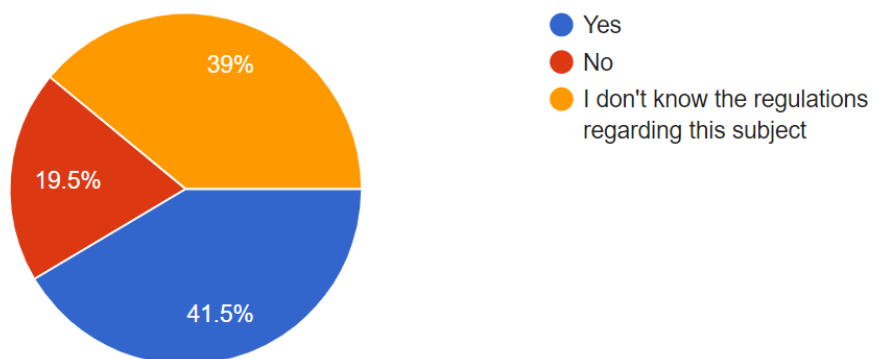
22. Do you think that a 'support program' will help seafarers with depressions?

41 responses



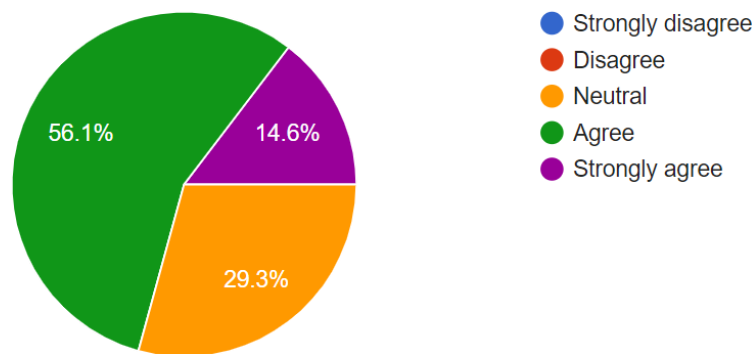
23. Are you satisfied with the existing regulations regarding mental health on board of ships?

41 responses



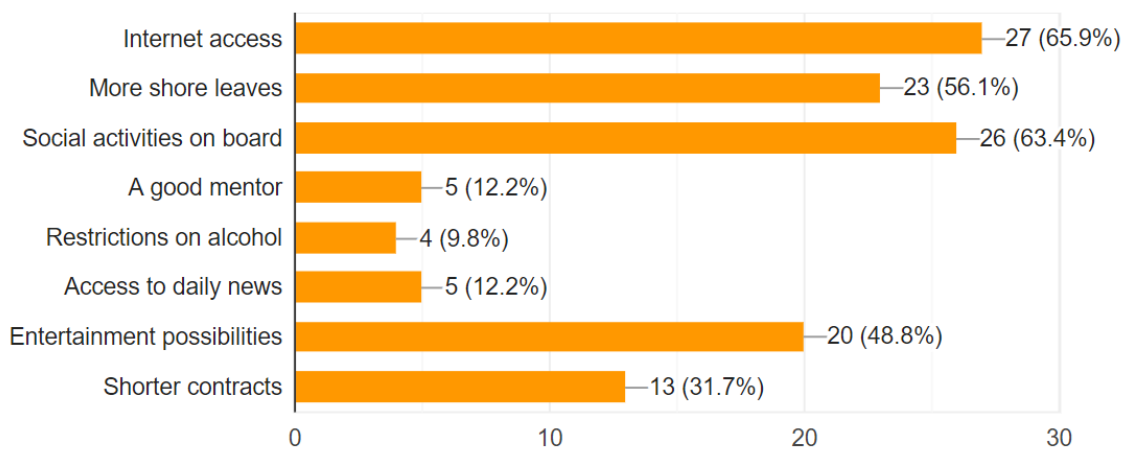
24. Social interaction on board is really important to my mental health.

41 responses



25. How can social isolation being prevented on board?

41 responses



26. Working on board brings me a lot of stress.

41 responses

