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WORLD MARITIME UNIVERSITY

Dalian, China

**STUDY ON INFLUENCING FACTORS OF
SEAFARERS' MENTAL HEALTH AND
PRECAUTIONS OF PSYCHOLOGICAL
DISEASES – AND RELATED INTERVENTION
MECHANISM UNDER THE MLC, 2006**

By

OUYANG XIAOLI

The People's Republic of China

A research paper submitted to the World Maritime University in partial
Fulfillment of the requirements for the award of the degree of

MASTER OF SCIENCE

**(MARITIME SAFETY
AND ENVIRONMENTAL MANAGEMENT)**

2016

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DECLARATION

I certify that all the materials in this research paper that are not my own work have been identified, and that no materials are included for which a degree has previously been conferred on me.

The contents of this research paper reflect my own personal views, and are not necessarily endorsed by the University.

Signature: Ouyang Xiaoli (mobile phone: +86 13827172041)

Date: 5 August, 2016

Supervised by: Dr. Liu Zhengjiang

Professor of Dalian Maritime University

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ABSTRACT

Title of Research paper: **Study on Influencing Factors of Seafarers' Mental Health and Precautions of Psychological Diseases – and Related Intervention Mechanism under the MLC, 2006**

Degree: **MSc**

This paper is aimed to pinpoint the characters of seafarers' mental health and the factors that might affect the mental status of seafarers while they serve onboard ships. By discussing the major causes of mental illness, this paper further puts forward proposals for the effective elimination of adverse factors and practical measures that may be adopted to protect and promote seafarers' mental health.

With the entry into force of MLC, 2006, growing attention on seafarers' decent working and living conditions has been attained in international society. Provisions of the Convention have been updated and highlighted to protect seafarers' occupational safety and health, which contains the mental health care for labors working onboard. Mental well-being has been proved to be extremely significant to physical fitness, so that seafarers' psychological disorder can possibly produce damaging influence on safe navigation and operations. Governments, competent authorities as well as seafarers themselves should resort to effective precautions to prevent any potential occurrence of typical mental illnesses.

KEY WORDS: seafarers, mental health, MLC, decent working and living

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LIST OF ABBREVIATIONS

IMO	International Maritime Organization
ILO	International Labor Organization
MLC	Maritime Labor Convention
OSH	Occupational Safety and Health
SCL	Self-Checklist

CHAPTER 1: INTRODUCTION

1.1 Growing concern for seafarers' well-being reflected in the MLC, 2006

It marked an eventful prelude when the ILO passed a set of new labor standards – the Maritime Labor Convention by an overwhelming majority at the 94th International Labor Conference (Maritime Session) on February 23, 2006, which brought the subject of decent work and overall wellness of seafarers into the spotlight. The Convention has integrated and updated existing 68 ILO Conventions and Recommendations in maritime sector that have been approved since 1920. The Director-General of ILO, Mr. Juan Somavia claims that the adoption of the MLC, 2006 is a great progress of epoch-making significance for global labor. This Convention, as he highlights in the speech, can be regarded as a prominent strategic advance of ILO during its promotion of the agenda of seafarers' decent working and living¹. Practical approaches and solutions will be put forward for general application and implementation worldwide by the Convention due to the fact that it is the result of negotiation and compromise of seafarers, shipowners and governments from over 80 countries.

According to the estimation of the ILO, nearly 6,300 people risk their lives every day because of various work-related accidents or diseases². Injuries or even deaths induced by scanty public concern for occupational safety and health not only add to the cost of individuals as well as the workers' families, but also become the major

¹ ILO Director-General says new maritime Convention on track to make labor history. <http://www.ilo.org>.

² ILO: *Estimating the economic costs of occupational injuries and illnesses in developing countries: Essential information for decision-makers*, ILO Program on Safety and Health at Work and the Environment (SafeWork), 2012. <http://www.ilo.org>.

domestic financial burden. Due to the particularity of maritime working conditions, these problems can be especially acute and happen more frequently to seafarers serving onboard compared to other types of profession on land. Those seafarers, to be more specific, who are engaged in oceangoing voyages, are suffering from increasingly high levels of stress physically and psychologically because of long hours of work as well demanding and hazardous tasks. Furthermore, current researches have demonstrated that a large proportion of physical illnesses are initiated by unstable mental states. The issue of seafarers' mental health can no longer be neglected in international community.

Therefore, the MLC, 2006 has explicitly dealt with health and safety protection as well as accident prevention in its Regulation 4.3 and the related Code (Standard A4.3 and Guideline B4.3) with the stated purpose of making sure that seafarers are physically and mentally fit for operating in a secure and productive way. In addition, as the supplementary instructions to member States of the MLC, 2006, Guidelines for implementing the occupational safety and health provisions of this Convention were also adopted in October 2014 aiming to provide practical assistance for relevant authorities. Mental well-being has definitely been one of the key emphases of the instruments above mentioned.

1.2 Objectives of the study

This paper is going to take the opportunity to observe and study previous researches concerning seafarers' mental health status with the aim to ascertain what the in-depth causes are of high-incidence psychological disorders among this specific group, and to explore and propose corresponding precautions based on related ILO provisions and guidelines. Through analyzing influencing factors from various perspectives, the study is supposed to also discuss and recommend an effective interventional

mechanism in order to early detect potential psychological issues and conduct timely guidance. Moreover, the ultimate purpose of this paper will be an attempt to raise public concern of shipowners, companies, labor communities and industry about seafarers' mental well-being and emphasize its significance to safe shipping and secure operations.

1.3 Methodology

So as to familiarize myself with this remarkable and somehow sensitive topic, recent cases have been searched and collected from internet of accidents arousing from seafarers' negative emotions. Meanwhile, correlative literature and information has been widely reviewed before composing the paper, including the ILO documents, conventions, articles from periodicals, master's thesis and any helpful academic works. An abundant amount of up-to-date statistical data was acquired during opinion exchanges with colleagues working in seafarers' management department, and advice seeking from experts from mariner colleges. Besides, the interdisciplinary knowledge was considerably applied and required in relevant study which is involved with rudimentary concepts of social psychology and navigational hygiene.

1.4 Structure of the paper

This research paper is designed to consist of five chapters. Chapter two concentrates on elaborating the features of mental health status of ocean-going seafarers in a way of combing psychological theories, while the following chapter develops an insightful analysis probing into the reasons in terms of biological and physicochemical impacts. Chapter four presents a series of rationalized and systematized recommendations on how to prevent any possible occurrence of mental illness among seafarers beforehand and also, how to improve the overall situation via mechanism establishing and policy making processes. Finally, the last chapter

provides a conclusion of author's viewpoints with emphasis on the important role that seafarers' psychological quality plays in long-term development of labor community.

CHAPTER 2: Features of seafarers' mental health characteristics

2.1 Identification and related standards

Following the definition stated in the Preamble of the Constitution of the World Health Organization, "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". Body and mind are two inseparable component parts which constitute a dialectical unity. The former refers to the fitness of physiology including physique and body functions; the latter one deals with human beings' willpower, emotions and personality. Physical and mental health are equally crucial, and in the meanwhile, mutually constrained. The status of psychology tends to exert influence on the physical health, and even make a difference to individual life as well as people's undertakings. The importance of mental fitness has been generally recognized, nevertheless, when it comes to daily practice, one's psychological disorder is often received inadequate attention nor any medical response or proper treatment. Hence, for every individual, to establish the concept of maintaining a sound mentality appears to be more vital than ever before.

Currently there are no objective and accurate quantitative evaluation methods for human's mental health since it has been a rather complex topic. In line with the comprehensive research perspectives from home and abroad, being healthy mentally should be reflected in the following aspects (Shi, 2001): integral personality, normal

intelligence, emotional stability and harmonious interpersonal relationship. Further elaborating, personality is principally concerned with individuals' psychological characteristics or specific patterns of behavior. A sound and unified personality usually incorporates relatively stabilized emotion state, tenacity, flexibility, a strong sense of responsibility and good self-control. As for intelligence, it is embodied in one's observation, concentration, memory, imagination and ability of thinking. Only the persons with normal intelligence are able to actively and consciously foster their own abilities stated above and reach their full potential in cognitive activities and concrete practice. Likewise, emotional health is mainly reflected in being optimistic, cheerful, enthusiastic, self-confidence, full of hope for life, effective control and regulation of sentiments. Above all, concordant human relations serve as the most indispensable prerequisite for mental well-being. The relationship of harmony is recognized as a reasonable manner, maintaining of an independent personality, being lenient with people and objective when evaluating others as well as oneself.

In combination with the peculiarity of seafarers' working and living environment, a mentally healthy seafarer shall fulfill the following conditions (Liu, 2003):

1. A certain level of knowledge of nautical life shall be necessary, which provides the foundation for problem confrontation and solving.
2. He/she shall be capable of performing to the best of his/her ability out of great devotion for the career.
3. Excellent psychological adjustment skills during the voyage are particularly essential, including managing to steady one's nerves in extreme situations, freeing one's mind from worries and reducing psychological conflicts.

2.2 Necessity of keeping seafarers healthy and sane

Apparently, the 21st century is the ocean's century. Seas and oceans have become the

second largest living space for human survival and development, on which competition between various nations has grown far more intense than before. The full exploitation and utilization of marine resources is a consequent requirement for countries that are pullulating all over the globe. Besides, the main channel of international trade and bulk cargo transportation can only be the ocean as well. As indicated by a famous remark prevailing in the global shipping community which says “If there are no seafarers, there will be half of the population suffering from starvation and exposure”, this extraordinary profession is definitely of utmost importance to the prosperity of mankind and their community. Some parts of the world with abundant resources are relatively low in production capacity so that fail to make maximum use of the resources, while other districts require a huge amount of energy to meet the needs of production and daily use. Under this circumstance, high efficiency of maritime transport makes ships as the most primary means of conveyance.

Recalling the developing history and current situation of shipping in China, waterway carriage supported by seafarers is responsible for 45.8% of domestic cargo turnover and 93% of foreign trade transport (Gao et al., 2000). It is no exaggeration to say that China’s economic growth is possible to stagnate without shipping. Invigoration of national economy, safeguarding of public security and expansion of opening-up can be all attributed to seafarers concurrently. It is noteworthy that, on the other hand, container ships that symbolize shipping modernization emerged in large numbers on the oceans in the mid-1980s, the high-speed, convenience and wide coverage of which brought about essential transformation to shipping industry wherewith. Nonetheless, advanced and highly automated ship navigation equipment tends to make a reduction on safe manning, undoubtedly resulting in crew members suffering from accumulated work load and fatigue.

2.3 Integrative studies of seafarers' professional characteristics

Due to the fact that nowadays the study mode is gradually changed from the technological-medical model to the social-psycho-biological schema, mental health and psychological diathesis of seafarers has gained increasingly more attention of research scholars in various fields.

As demonstrated by the survey and analysis carried out in China of personality factors of 487 nautical students and crew members, self-discipline of maritime-major students is, to some extent, lower than that of onshore-students; vigilance of cadets on board is stronger compared to maritime-major students at school, while intelligence and aggressiveness is reduced. When comparing crew members engaged in navigation with those who are on public holidays, the former group evidently have greater anxiety and tension, but lessened intelligence and sensibility (Xu et al., 1995).

From the viewpoints of another research with regard to the relationship between somatopsychic diseases and psychological stress (Liu et al., 1997), the incidence of psychosomatic ailments among oceangoing seafarers remains high for years which accounts for approximately 49.9%. Furthermore, the aggregate scores of self-rating anxiety scale (SAS) (Wang and Chi, 1984) and self-rating depression scale (SDS) (Wang, 1984) are both significantly higher than the control group.

Self-reporting Inventory, also known as Symptom Checklist 90 (SCL-90), is one of the world's most famous mental health test scales, currently being widely applied in outpatient clinic of psychological barriers with numerous advantages including its informative contents, reflection of substantial symptoms and accuracy of the testing

results. China COSCO has set up a specialized research group and successively conducted five psychological health tests via utilizing SCL-90, collecting near six thousand samples from seafarers in the end. The results visibly present that the overall mental health status of Chinese mariners is worse than that of the general population, besides, the positive rate of mental health symptoms appears to be well above as illustrated in Figure 1.1 (Li and Yuan, 2001).

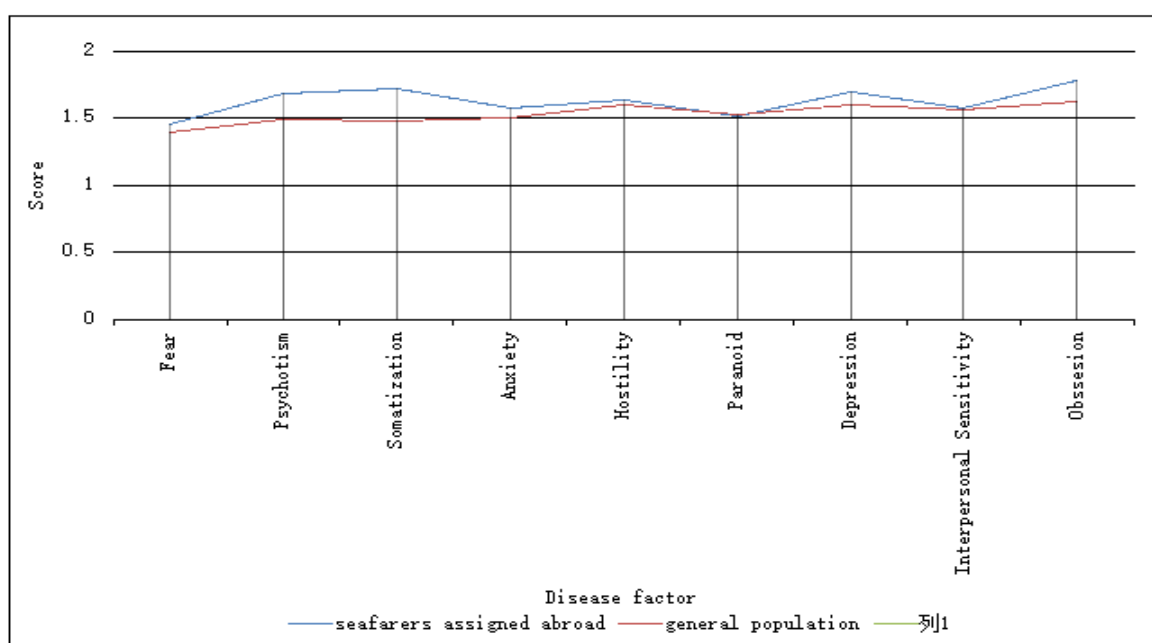


Figure 1.1 Comparison of the mean value of disease factor between oceangoing seafarers and national normal population

Source: Education of Shipping Safety and Shipping from Wuhan Ship Building, 2001

In light of the unique natural environment of sea and artificial atmosphere of ships, seafarers have their own psychological traits as follows:

1. Stereotype. Since the hierarchy, position and division of labor is fixed onboard the ships, the nature and scope of work will also be determined once the post is

distributed. Therefore, it is almost the same role that seafarers play no matter at work or during their leisure time, which tends to violate the requirement of role changing advocated in psychological theory. The trend of crew members forming a modeled pattern of mental activities will easily lead to individual psychological problems.

2. Tension and fatigue. With the development of vessel enlargement, modernization and highly-automation, staffing onboard has been accordingly reduced, thus the workload accompanied by huge pressure that fall on each seafarer rise to a maximum level. Additionally, all types of stringent security checks also have to be coped with, not to mention the emergent situations such as encountering pirates, mechanical failures or other unexpected crisis. The issues stated above will negatively trap the crew members in a state of psychological tension for a long period, followed by sluggish reaction, confusion, panic and other mental disorders.

3. Emotional fluctuations. With the extension of hours of work onboard the ship, this symptom will grow more obvious. Adverse influences can be disastrous, exposing sufferers to declined physiological activity index, irritability, decreased ability, sleep disorders, aggravated homesickness and distinct job burnout. In authentic cases, some seafarers even behave irrationally, fight with others for the sake of trivial matters while become repentant soon afterwards. And some are shrouded with taciturnity, often worry a lot and are prone to feel disheartened most of the time.

CHAPTER 3: Analysis of influencing factors of seafarers' mental issues

3.1 Impact of demographic characteristics of seafarers

Modern medical mode accentuates that various influences of biological, psychological and social factors should be considered as a whole. From the view point of health and disease, with the advancement of new medical mode, the public gradually realize the essentiality of mental well-being and the vital impact of social psychological factors on human health. Due to the different mental states in different ages and cognitive differences caused by different cultural backgrounds, divergence of mental health states of people can be quite notable. Meanwhile, seafarers are contended as the main force of the development of shipping industry, and the keys to guarantee the operational safety of ships. Seafarers, as a special occupational group in modern society, are bound to bear critical psychological pressure that onshore labors do not have to, for instance, unpredictable perils of the sea, harsh sailing environment, closed working venue, blocked information, isolation, the monotony of meals, disorders of biological clock, lack of social support, the dissatisfaction of opposite sex interaction, as well as the limitation of interpersonal communication, love, marriage and parenting education. Due to the specific conditions of offshore operations, the mental stress and the maladaptive behavior caused by multifarious stress factors has become a salient reason for the declination in the level of psychological health. Thus, it is necessary to analyze the causes for the discrepancy existing in seafarers' mental health from multiple perspectives.

3.1.1 Nationality and cultural background

During the exploration of standards of mental health status, it has been discussed that whether social adaption has become a standard of mental health and whether the standard has cultural relativity to a certain extent, and meanwhile, disparate

definitions have been proposed on whether the same mental state is in accordance with the health standards under different cultural backgrounds. How to be not confused with limit of mental health standards, social values and morality has been the concern of researchers all along. Some researchers argue that mental illness has the relativity of cultural background; its essential features and prognosis of the patients are unable to be identical according to the cultural disparity. In a society, cultural beliefs, habits, norms and behaviors, which are regarded as appropriate, may not be applicable to other societies. Likewise, the definition of psychiatric problems also varies from culture to culture therein, since specific cultural functions are indicated in different cultures. Culture plays a major role in the generation of psychosis by reason that in essence, mental disease is made up of social culture, and at this point they are different from physical illness. For example, because of the different ways of expression, substantial discrimination lies in symptoms, care seeking behaviors, course of disease and therapeutic response for one type of depression that is mainly manifested by somatic symptoms and low back pain (so-called “occult depression”) and another type manifested by sense of guilt or disappointment. Compared with biological factors, the social psychological aspects of the course of disease are more likely to deprive patients of their social function and work ability (Xiao, 1992).

Furthermore, a prevailing point of view is put forward that the standards of mental health are intercultural and meanwhile embodied with cultural relativity, which means the standards must have some characters in common as well as relativity in different cultural and social backgrounds (Liu, Zhang and Su, 2002). According to a famous investigation (Xie, 2012), it is found that Chinese seafarers and foreign seafarers have large distinction existing in mental health status because of their religions, cultural backgrounds and education degree. For example, European and

American seafarers, are calmer than the Asian seafarers with the same age in the face of sea waves and emergencies. And Chinese seafarers with the same position whose educational degree is in college or above are obviously with relatively high quality. When they are confronted with unforeseen situations at sea, their scores on the anxiety, panic and others factors appear to be far lower than Philippines seafarers with lower academic degree. Correspondingly, due to the more diverse religions and cultures, the score of foreign seafarers in hostility, somatization, depression and other factors are more satisfying than Chinese seafarers especially after a long sea voyage. This is concerned with to the fact that the spiritual support of most foreign seafarers are based on their religious belief, which corroborates again the cultural relativity and cross-culture of mental health standards.

Language is always associated with nationality and culture. The international seafarers' comprehension and mastery of English are not of the same level. Hence, for seafarers from different countries and regions, there are certainly a mass of general problems and obstacles lying in the deep level of communication in addition to routine work. Taking Chinese seafarer as an example, since it is somehow difficult to overcome the obstacles in language, the daily contacts of Chinese seafarers are often confined to a minimized group of Chinese members in the major environment composed of foreign seafarers, which is detrimental to the development of interpersonal relationships, and make it tough to blend in and communicate with the group of more crewmembers, not only resulting in inconvenience to one's work but also affecting the opportunity of promotion in a negative manner.

On account of various nations, cultures, educational and religious backgrounds which seafarers come from, difference always occurs in terms of facing or dealing with contingency, easily causing unpredictable conflicts and contradiction because of

opposing views towards problems and ways of handling things. Therefore, different cultural backgrounds not only cause a huge barrier among seafarers from different nationalities, drifting in a foreign country for many years, but also bring mental pressure to a certain extent. Under a more serious circumstance, it will affect the enthusiasm of seafarers and make a sense of estrangement to the surrounding social environment. As time passes by, the possibility will increase for seafarers to grow hostile and anxious, injuring their mental health.

3.1.2 Marital status

Marriage is an important aspect of the influencing factors of mental health of seafarers. Due to the nature of the work, it decides that the seafarers are placed in a working environment of long-term drifting on the oceans and have to be far from family and relatives. This predicament makes normal communication cannot be well achieved between a lot of young seafarers and their opposite sex, leading to a great many of marital problems that cannot be resolved. Due to long-term working on the sea, seafarers are separated from the family for months or even years, and the quality of subsequent marriage cannot be guaranteed in the sense of isolation.

3.2 Impact of professional characters and working environment

3.2.1 Berthing frequency

Long and uninterrupted ocean-going navigation poses extreme challenges to seafarers both psychologically and physically. On board, seafarers undergo boring nautical life without recreation, which gives them an impulse to go onshore upon berthing to take a breath of fresh air. In addition, during each voyage to-and-fro rocking of ship hulls render seafarers to feel fatigue more easily, and restricted

telecommunications differentiate their group suffering homesickness from ordinary people who spend most of time on land and keep in close touch with relatives through easier access to mobile phones, computers and other modern electronic equipment.

On-board life in a long term, unchanged and uninterrupted role model around the clock, and lack of other roles to play lead to the continued pile-up of unhealthy emotions. Therefore, it is imperative for seafarers to disembark after berthing, reach out to the outside world, and seek channels to contact relatives, play different roles through their own ways, and discharge pressure and fatigue.

Most of the interviewed Chinese seafarers are working with international liners of China COSCO Shipping Corporation Limited (COSCO) and China Shipping Container Lines Co., LTD (CSCL). Shipping lines of both COSCO and CSCL concentrate on long lines extending to Mediterranean and America, and these ocean-going freighters with lesser berthing frequencies make it extremely difficult for their seafarers to disembark and keep touch with family members. Put it in another way, insufficiency of essential social supporting system has a direct/indirect impact on the healthy development of seafarers' psychology.

By comparison, shipping companies served by foreign seafarers have more flexible shipping lines, and their seafarers have more chances to disembark and go onshore to dispel unsound emotions and forget negative memories. Furthermore, loading and unloading operations on shore mean more work to be done than that underway. Therefore, frequent berthing could cause inadequate sleep, more working pressure, and less chance to relax onshore.

3.2.2 Sea-going duration

LIU Wen and other scholars have made an evaluation of psychological parameters through Symptom Check List 90 (SCL90) on seafarers undergoing 132 days at the sea (Liu et al., 2004). Measurements indicate that seafarers undergoing long-term navigation, especially above six months, and in this case symptoms beyond three months are most prominent, mainly in loneliness, solitude, nerve, anxiety, irritability, dizziness, diarrhea and other somatization situations. Investigations conducted by GAO Fu and other scholars show that seafarers in a voyage beyond three months tend to suffer damages in heart and soul, and witness a higher occurrence of diseases than those within three months (Gao et al., 2000).

3.3 Impact of interpersonal relationship

Human are inherently social animals. One cannot survive without being part of the society. Being comfortable with people is the constituent element of social adaption. Psychological problems often occur when people find it difficult to handle interpersonal relationship (Zhu, Fang and Pan, 2002). Maslow's Hierarchy of Needs (Huang, 2001) lays out one of the basic needs-the emotional need to be encouraged, valued, and supported is shared with almost all people. Good interpersonal relationship helps one feel secured and accepted, which brings along moments of happiness and satisfaction, and ultimately mental healthiness. On the contrary, bad relationship makes people nervous and defensive, which brings along pressure and loneliness. Therefore, people cannot live without social interaction. Being in a harmonious relationship is crucial to everyone. Seafarers belong to a special social group bounded by a certain responsibility to work for a long time on the ocean. Such group consists of tens of seafarers and they drifted a long period of time miles from the shore without any interaction with the outside world apart from that of them own. It is therefore, more important that they care and support each other. Personal relationship between seafarers is playing an important role in developing their mental health.

Problems facing seafarers when trying to develop good relationship: First, they find themselves dealing with people from a very narrow group and the group changes

when factors such as work-life balance, personal development kick in. It is imperative that the admin and staff change routinely and that people need to deal with new staff all time. This means they need to get to know the new environment and rules which are set up by the new team. To some extent, it gives people reasons to worry about their jobs, and leads to anxiety and discomfort. Due to holiday arrangement and other relocation issues, 15% of the staff changes for every single trip. Even though traveling on the ocean, staff needs to deal with new people and sometime not in their native language. They sometime need to know several languages in order to communicate. This to some extent makes developing personal relationship a difficult task or even a psychological burden, causing trouble to their mental health. Second, lack of interaction with the opposite sex is another problem. People often encounter other people from different background, different countries with different education level, religious belief or sometimes even from countries who show hostility to each other. This inevitably brings obstacles between communications. In that situation, it's difficult and complicated to develop a good relationship.

Because of their work environment, they live together which allows limited privacy. There are quite few female staff on both domestic and international navigation. Lack of good relationship with the opposite sex leaves emptiness in the mind of seafarers. Studies have shown that those who live without stable relationship are more likely to develop psychological problems. In this highly male dominated group, lack of communication with the opposite sex impacts negatively on both their emotional and mental well-being. Due to the bureaucratic working environment, senior staff and their junior coworkers limits their communication on issues related to the work itself. This might cause discomfort to junior seafarers and force them to alter their characteristic, living habits, or even lifestyle in order to accommodate new admin team and work environment. In terms of lifestyle, Chinese seafarers has got used to share more of their lives than those who serve onboard ship engaged in international sailing. Those who work on the international navigation usually maintain a subtle distance between senior and junior seafarers, and most communication occurs around work-related issues. In addition, sometimes seafarers feel "home-sickness". However, there's not much they can do other than coping with it on their own. Limited social relationship causes discomfort on both their personal and the work life. Therefore, being alone on the oceans, limited personal life makes seafarers more likely to value a caring, cooperative and sustainable relationship

CHAPTER 4: Corresponding precautions and intervention mechanism

4.1 The Social Interference

4.1.1 Stronger social support

The mental health of seafarers has substantial connections with the social environment they are in, and the negative social factors can contribute materially to the generation and deterioration of the seafarers' mental problems. Long time spent at sea is expected to cause stress, anxiety, depression or some even more serious disorders such as PTSD (posttraumatic stress disorder) and the inclination to commit suicide. Such mental stress or disorders are associated with hard labor onboard ships at sea and the absence of support and care from family, friends and other social connections for too long time. The feeling of loneliness, without proper and timely relief, can make the situation even worse. The prevention of mental diseases and the treatment of mental disorders require not only a thorough survey on and investigation into the causes of those disorders onboard ships, but a greater emphasis on seafarers' needs of adequate social support which can help them relieve the burdens on their minds before such burdens actually harm or even crush them.

4.1.2 The involvement of more support from family

The home issues, as found in some studies, are one of the major causes of seafarers' mental stress. Due the factual difficulty in maintaining constant and regular correspondence with their family members, the bonds between seafarers and their family tend to be weakened, which might not only cause the lack of support from family when the seafarers are in need of it, but lead to some serious domestic events

such as marriage crisis and problems concerning the education of next generation, and that could lay even greater burdens on seafarers' minds. In order to solve this problem, various mechanisms have been laid down and trialed by some shipping companies, among which the practice of allowing seafarers to be accompanied by their partners or other family members on occasional voyages has proved quite effective. However, the companies practicing such measures only account for a quite small share of the shipping companies around the world. Even for the companies that currently allow the seafarers' family members to get onboard ships, usually because the religious rules or local tradition require so, as in some Islamic countries, only the masters and officers are privileged to such treatment, while the needs of the ratings regarding the company of family are obviously neglected.

4.1.3 Consultations and psychotherapies offered to seafarers

Considering the necessity of promoting security onboard ships and the effective implantation of safety and security regulations, especially after a series terrorist attacks occurring recently, it might be impractical to expand the range of seafarers who are entitled to enjoy the company of family onboard ships while at sea. But it can be compensated, as recommended by some seafarer welfare organizations, by offering timely and regular mental health consultations and psychotherapies to seafarers to help relieve their mental stress and provide seafarers with proper guidance in the resolution of the issues that might cause mental illness. This can be achieved by requiring ships normally engaged on long-time voyages to carry a qualified mental health counselor or a medical practitioner qualified to provide mental health consultations. Seafarers should be given opportunities to consult a doctor or qualified practitioner mental related matters both onboard ships and onshore, making it possible for the medical staff or specialist to deal with any mental

problems timely, expeditiously and appropriately. The records and the results of assessments of the seafarers' mental states should be kept in an orderly manner, while being kept confidential to protect the privacy of seafarers. The shipping companies should keep track of the mental states of the seafarers serving onboard their ships and should take precautions against the adverse factors that might lead to seafarers' mental states. Seafarers with severe mental problems should be relieved from duties and be given proper and adequate treatments. Furthermore, trainings for seafarers in the matters relating to mental health should be available, both onboard ships and onshore, to help them get a better understanding of the causes of mental illness and the proper preventive methods.

4.2 The administrative/regulatory interference

The fitness of seafarers has always been a key issue for ship owners and operators. It has correlation with both the safe operation of ships and the welfare of seafarers. The good physical and mental status, says IMO, is no less important for safe navigation than the appropriate handling and operation of ships' equipment and its condition. In order to minimize the negative effect resulted from fatigue after long-time labor at sea and promote seafarers' mental health, targeted and practical measures should be laid down by means of national legislation or the establishment of international regulations, like international conventions or protocol. Enough focus should be given to the implementation and enforcement of the national laws, regulations and other measures and relevant international conventions, protocols and other instruments, so as to effectively protect the seafarers' right both domestically and globally.

Globally, several important international conventions and relevant guidelines have already been put in place by the International Labor Organization and International Maritime Organization, such as the MLC, 2006 and the International Convention on Standards of Training, Certification and Watch keeping of Seafarers (STCW), to prescribe the requirements of both physical and mental fitness of seafarers and how to protect it rightly. For example, the MLC, 2006 explicitly requires that the sleeping rooms, sanitary accommodation, ventilation, lightning, heating, recreational facilities, medical equipment must meet the basic standards laid by the convention, so as to guarantee that the seafarers can have decent and safe working and living environment. Besides, the convention also provide for that the seafarers should be allowed to be accompanied by their partners and have access to the Internet and mail

services which are essential for the modern people to maintain their social connections. China, which has just ratified the MLC, 2006 and will give full effect to it later this year, have enacted a series national regulations which put quite a lot of emphasis on the protection of seafarers' physical and mental health. For instance, the newly revised rules on the inspection and survey of ships have raised the standards of the minimum area of seafarers' bedroom, aiming to eliminate the adverse factors generated by the poor living condition. In line with the convention, the requirement of recreational facilities contained in the rules is more specific, which can help seafarers get more opportunities to relax themselves and thus relieve the burdens that might lead to mental stress. Furthermore, the restrictions imposed on the adverse amber factors such as vibration and noise in the living and working places onboard ships are going to be stricter than ever before, with the aim of creating a more agreeable and decent environment for the seafarers. To enhance the effectiveness of such regulations, a so-called "non-favorable" mechanism has been introduced by the MLC 2006, giving mandate to the port state governments to apply the standards set by the convention on all ships calling the ports that fall into their jurisdictions, no matter what national flag the ships are entitled to fly. Under the convention, for example, when calling a port of a country other than the one whose flag a ship is entitled to fly, the master should produce documented proof to the PSC officers that all seafarers serving onboard the ship are physically and mentally fit to fulfill their duties, and the seafarers are obliged to produce their annual medical examination reports to the PSCOs to substantiate the statement made by the master. Such measures will help realize a high-standard protection of seafarers' physical and mental health around the world through the uniform enforcement and implementation of the convention's provisions.

Undeniably, comparing with physical fitness, the mental health of the seafarers is kind of sidelined, and it true of both the ship owners and the seafarer recruitment and placement service. As of the date on which this paper was composed, there still aren't any special/specific standards of the mental health of seafarers published in China by the specialized/professional institutions or government agencies. There has been research into the mental health of seafarers going on in some countries, and the results are accessible in one way or other. But still, practical global measures, including the procedures of carrying out mental health examination, the standards of mental fitness and the rules of protecting mental health of seafarers remain something in discussion or simply the research papers.

4.3 Seafarers themselves

Firstly, the seamen have a misunderstanding of their own profession and they are unable to objectively assess their work. Secondly, the seamen have a

misunderstanding of themselves, they are self-dignified yet lack confidence, are unable to objectively evaluate themselves. Third, they have an overwhelming demand for positive outside influence. They are overly absolute when dealing with problems, using their own set of standards and values to judge others. Fourth, they cannot comprehend their own needs, and the society's drive and values. This lack of understanding leads to a low work morale, they are more likely to avoid problems at work rather than actively engaging and solving problems. Lastly, their personalities are introverted and sensitive, logically rigid, highly self-defensive, lack individuality, inadequate at communicate with each other and unable to form good social relations. In terms of objectivity, it is suggested as follows:

Firstly, the influence of the society as a whole: the current and future status of the economy, the public opinion and culture, the community and its surrounding in each the seamen live, will all have positive or negative influence on the psychological health of the seamen and their daily life. This causes a lack responsibility, unstable family, increase divorce rate and a series of related problems. Secondly, the inability of appropriately adjust to their work environment also increase the seamen's psychological stress. Third, serious personal events such as relationship problems, marriage problems, change of job role and important family incidents can all cause significant stress on the seamen. If too much happened in a short amount of time, too much for one to handle, parts of one's psyche will go into overdrive cause great stress physically and psychologically. Four, the maritime educational system, there is too much emphasis on examining knowledge and skills, and a lack of consideration on personal and psychological wellbeing of prospective seamen, leading to the seamen's inability to deal with high pressure situations.

Summarizing the above discussion on subjectivity and objectively, it is not difficult to see that difference in culture, conflicting values and communication are the direct root of extra work pressure on seamen working on international duties. Stress theory tells us that different people will respond to pressure differently: some people will be in denial, avoid, repress, attack (including self-harm) and self-blame as self-defensive mechanisms. These self-defensive mechanisms can ease the pain at a time, but they are not able to solve the root cause of these problems. Over a long period they may even cause serious mental health issues. Some people will employ positive approaches such as appropriately complaining, changing focus, relaxation, humor and self-deprecation, at least these methods do not cause harm to oneself. Good education on how to look after one's mental health and how to deal with stress is equally important as learning all the knowledge and skills of being a competent seafarer.

We create specific classes to teach topics relating to mental health and how to handle stress. From the maritime education system point of view, there are optional classes on mental health, but they are not tailored towards professional seamen. Usually, the

teachers in these classes are not sailors, so they are not able to relate to their students. Therefore, it is necessary to build a team of dedicated trainers and teachers who have experience in sailing to carry out research and teaching and increase maritime mental health education. Secondly, a good social support system is required. To handle stress, it requires the individual to be able to self-adjust, overcome their fears and positively engaged, it also requires support from society as a whole to reduce psychological pressure and increase one's ability to adjust. This kind of support comes from family, colleagues and the institution. It helps seamen to deal with stress, reducing accidents due to human error, making sailing safer.

Seamen should fully understanding the advantages and disadvantages of their profession. Whilst it is hard work being a sailing, one also have the chance to take full advantage of the sunshine and the sea, thereby enriching one's spirit and soul, and learn to take pleasure of one's work. Seamen should learn to appropriately adjust themselves mentally and to the environment, create a positive work environment by having good social relations to one's colleagues. This will help with mental health and increase productivity.

Self-efficiency is the basis of a positive mental attitude, it helps with self-recognition, encouraging understanding of oneself and fluid self-control. Self-efficiency means one understands that one is capable and can complete the task given. Therefore, the source of positive self-efficiency is for oneself a sobering understanding and correct evaluation of oneself. There are some misunderstanding of the profession of a seaman, such as high risk job and fast money. Seamen have to correctly recognize themselves, fully understand their own value, and objectively judge themselves. And on that basis, seamen should learn to accept themselves and their value, from which happiness and job satisfaction can be derived.

Self-defensive mechanisms refer to the psychological adjustments one performs when one is under stress due to negative past experiences. This kind of defensive mechanism is a psychological adjustment which looks to negate or reduce negative mental impact and restore peace of mind. As a special kind of work force, seamen should be more adequate when it comes to defensive mechanisms than normal citizens and have the ability to appropriately adjust psychologically to ensure mental health.

Being optimistic is a positive mental attitude, it is also referred to as laughing yoga. It means to have a positive and encouraging outlook on life, which helps with releasing stress and negative feelings. Optimism is not innate to everyone, it is a result of personality, experience and hard work. Sample survey shows that people who are more introverted, stubborn and sensitive are more prone to psychological issues as described above. And people who are more extraverted, active and outgoing are more likely to have positive interactions with other people and build good social relationships, they are also less likely to have psychological issues. A senior seaman

should encourage other seamen to have a positive outlook to the future and increase their self-confidence.

CHAPTER 5: CONCLUSIONS

Marine industry is a unique field. It is physically as well as mentally demanding to work at sea. Seafarers are expected to fulfill a certain number of special requirements. Health status and work abilities are the basic prerequisite for duty of care in the sea: seafarers have to work against severe natural environment and rigorous working conditions, make proper operational adjustment on board, and respond to emergencies and hazardous situations. They also required to safeguard the life and property on board and shoulder the responsibility of protecting ocean environment.

On the other hand, the professional characteristic and working living environment also affect seamen's physical and mental health status. It is generally recognized that under the effects of social psychological factors, or other physicochemical and biological factors, certain reaction will be triggered both physically and mentally. Effects to mental status and occurrence of disease may be caused by physical and mental function disorder. Many factors could affect seamen's mental states including life events, financial situation, social support, working environment, personality and behavioral characteristics etc. witch associate with other physicochemical and biological factors together to be effective. Therefore seamen's mental healthiness should be attended seriously. Effective measures should be put in place, regular health guidance and medical check-ups arranged base on the unique routine schedules of seamen, more caring and support from family and social, and counselling and intervention provided when issue occurred. It is essential seamen

realize the importance of their mental healthiness, and work on improving their mentality, health consciousness, and adaption to environment in order to reduce the chances of physical and mental illness.

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APPENDIX: A

Table (1): Summaries of 10 MBM proposals

No.	Title	Sponsor	Focus points of the proposal	Source
1	International Fund	Cyprus Denmark Marshall Islands Nigeria International Parcel Tankers Association (IPTA)	<ul style="list-style-type: none"> • Establish a global reduction target; • Purchase credits when emissions above target; • A mandatory registration for bunker fuel suppliers; • Maintain a global ship-specific registry; • Contributions collected per ton bunker fuel; • Subsequent adjustment made every four years or agreed interval; • GHG contributions used for mitigation and adaption purpose in developing countries; • Only Parties to the new convention eligible to receive the revenues; 	MEPC 60/4/8
2	Leveraged Incentive Scheme (LIS)	Japan	<ul style="list-style-type: none"> • Rationale same as international fund; • The concept of LIS: a part of GHG contributions is refunded to “good performance ships” 	MEPC 60/4/37
3	Port State Levy (PSL)	Jamaica	<ul style="list-style-type: none"> • Utilizing the ship traffic, energy and environment model (STEEM); • Levy charged on ships calling respective ports based on the amount of fuel consumed by the 	MEPC 60/4/40

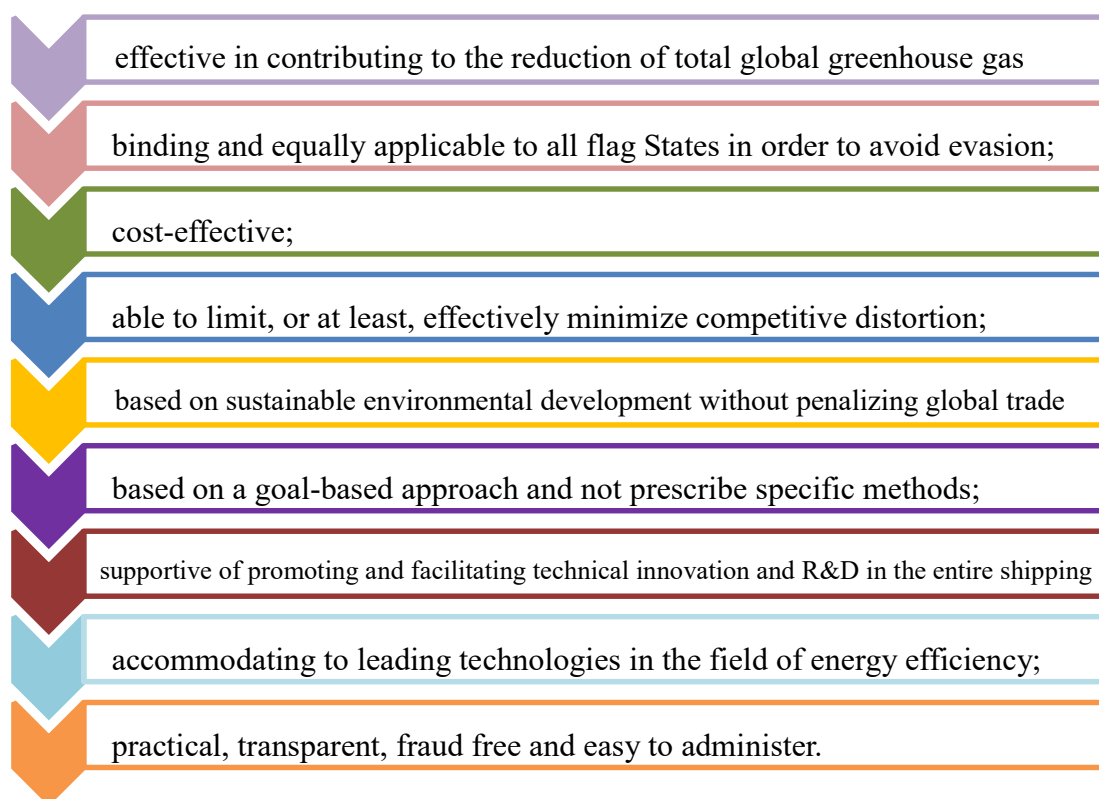
			<ul style="list-style-type: none"> • respective ship on its voyage to that port; • Regardless ship's design, operations or energy source; 	
4	Ship Efficiency and Credit Trading (SECT)	United States	<ul style="list-style-type: none"> • Purposely designed to focus on emissions reduction activities in shipping sector; • All ships are subject to mandatory energy efficiency standard; • Establish an efficiency-credit trading programme; • The stringency level of efficiency standards based on efficiency technology and methods; • Standards become more stringent over the time; • Achieve relative emissions reduction, i.e., reductions in emissions per ton mile and not set an overall target for the sector; 	MEPC 60/4/12
5	Vessel Efficiency System (VES)	World Shipping Council	<ul style="list-style-type: none"> • Ship judged against a requirement to improve its efficiency by x% below the average efficiency; • Cover both new builds and existing ships; • New builds must meet the specified standards or they may not operate; • Existing ships failing to meet the required standards have to pay the fee applied to each tone of fuel consumed; • Standards become more stringent over the time; • A more efficient ship would pay a small penalty than a less efficient ship that falls short of the 	MEPC 60/4/39

	standards by a wide margin;			
6	Emissions Trading System (ETS)	Norway	<ul style="list-style-type: none"> • Set a sector-wide cap on net emissions from international shipping; • Establish a trading mechanism, both in-sector and out-sector; • Use of out-sector credits allows for further growth of the shipping sector beyond the cap; • Auction revenue provides for mitigation and adaption within maritime sector; • Ships require to surrender one credit for each ton of CO₂ emitted; • ETS covers all types of ships engaged in international trade above a certain size threshold; 	MEPC 60/4/22
7	Emissions Trading System (ETS)	United Kingdom	<ul style="list-style-type: none"> • Similar as ETS proposed by Norway; • Methods of allocating allowance are different; • Allowance could be allocated to national governments for auctioning; • Net emissions cap would be set with long term declining trajectory with discrete phases; 	MEPC 60/4/26
8	Emissions Trading System (ETS)	France	<ul style="list-style-type: none"> • similar to the Norwegian proposal for an international ETS; 	MEPC 60/4/41
9	A penalty on trade and development	Bahamas	<ul style="list-style-type: none"> • no explicit standards or reductions to be achieved in-sector or out-sector; • set forth that the imposition of any costs should be proportionate 	MEPC 60/4/10

	to the contribution by international shipping to global CO2 emissions;			
10	Rebate Mechanism (RM)	International Union for Conservation of Nature (IUCN)	<ul style="list-style-type: none"> • Rebate Mechanism to compensate developing countries for the financial impact of a MBM; • A developing country's rebate would be calculated on the basis of their share of global costs of the MBM, using readily available data on a developing country's share of global imports by value as a proxy for that share; • Rebate Mechanism could be applied to any maritime MBM which generates revenue such as a levy or an ETS; 	MEPC 60/4/55

As agreed, a MBM must meet all the nine fundamental IMO principles for future regulation on GHG emissions from International Shipping. The nine principles are summarized in the below table:

Table (2): IMO NINE Fundamental principles for regulating GHG emissions



effective in contributing to the reduction of total global greenhouse gas
binding and equally applicable to all flag States in order to avoid evasion;
cost-effective;
able to limit, or at least, effectively minimize competitive distortion;
based on sustainable environmental development without penalizing global trade
based on a goal-based approach and not prescribe specific methods;
supportive of promoting and facilitating technical innovation and R&D in the entire shipping
accommodating to leading technologies in the field of energy efficiency;
practical, transparent, fraud free and easy to administer.

APPENDIX: B

Annex 1 countries (Kyoto Protocol)			
1	Australia	22	Liechtenstein**
2	Austria	23	Lithuania*
3	Belarus*	24	Luxembourg
4	Belgium	25	Monaco**
5	Bulgaria*	26	Netherlands
6	Canada	27	New Zealand
7	Croatia*/**	28	Norway
8	Czech Republic*/**	29	Poland*
9	Denmark	30	Portugal
10	European Economic Community	31	Romania*
11	Estonia*	32	Russian Federation*
12	Finland	33	Slovakia*/**
13	France	34	Slovenia*/**
14	Germany	35	Spain
15	Greece	36	Sweden
16	Hungary*	37	Switzerland
17	Iceland	38	Turkey
18	Ireland	39	Ukraine*
19	Italy	40	United Kingdom of Great Britain and Northern Ireland
20	Japan		
21	Latvia*	41	United States of America
*Countries that are undergoing the process of transition to a market economy.			
** Publisher's note: Countries added to Annex I by an amendment that entered into force on 13 August 1998, pursuant to decision 4/CP.3 adopted at COP 3.			
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