

Occupational Stress and Psychological Well-Being among Seafarers

Bhanu Makala Damodharam

Department of Psychology, Jain (Deemed-To-be University), Bengaluru, Karnataka, India
USN:241MSCD00405

Abstract: *Seafaring is a demanding occupation characterized by prolonged periods away from home, long and irregular working hours, physical workload, fatigue, confined living conditions, limited shore leave, and reduced social interaction. These conditions can negatively affect the mental and physical health of seafarers and increase their vulnerability to psychological difficulties. The present study aimed to examine the mental health challenges experienced by seafarers and to identify individual, occupational, and environmental factors associated with their psychological well-being. A quantitative, cross-sectional approach was used to examine occupational stress and psychological well-being among seafarers. Information was collected using demographic details and standardized psychological measures. The study focused on occupational stress, psychological well-being, fatigue, sleep difficulties, social isolation, and other factors influencing seafarers' mental health. Descriptive and inferential statistical methods, including correlation, t-test, and one-way ANOVA, were considered for analysis. The findings further indicate that long working hours, poor sleep, extended periods at sea, workload, limited shore leave, separation from family, poor organizational support, communication difficulties, and challenging physical environments contribute to psychological stress. Individual factors such as age, seafaring experience, physical health, BMI, and chronic health conditions were also associated with mental health outcomes. In contrast, resilience, psychological capital, social support, teamwork, supportive leadership, and appropriate organizational resources were identified as protective factors. The study concludes that seafarers' mental health is influenced by the interaction of individual and occupational factors. Mental health promotion in the maritime industry should therefore include stress management, resilience training, adequate work-rest schedules, physical health promotion, supportive leadership, improved communication, and accessible psychological services. Addressing these factors may contribute to improved psychological well-being, work performance, safety, and overall quality of life among seafarers.*

Keywords: Seafarers, Mental Health, Occupational Stress, Psychological Well-Being, Depression, Anxiety, Burnout, Fatigue, Resilience, Maritime Industry

1. Introduction

1.1 Background of the Study

The maritime industry is one of the most important sectors of the global economy, with approximately 90% of international trade transported by sea. Seafarers play a vital role in ensuring the safe and efficient movement of goods across the world. Despite their significant contribution, the nature of seafaring is physically demanding and psychologically challenging. Long periods at sea, prolonged separation from family, demanding work schedules, multicultural crews, limited recreational opportunities, isolation, and exposure to harsh environmental conditions make seafaring one of the most stressful occupations. Mental health has become an important concern in the maritime industry. According to studies conducted by the International Transport Workers' Federation (ITF) Seafarers' Trust and Yale University, a considerable proportion of seafarer's experience symptoms of depression, anxiety, and suicidal ideation. Research indicates that approximately one fourth of seafarer's report symptoms of depression, while many experience anxiety, burnout, emotional exhaustion, loneliness, and chronic stress. Occupational stress among seafarers arises from multiple factors. Long working hours, irregular work-rest schedules, sleep deprivation, heavy workloads, noise, vibration, extreme weather conditions, limited communication with family, fear of piracy, and restricted shore leave contribute significantly to psychological distress. The COVID-19 pandemic further intensified these challenges by delaying crew changes, extending contracts, restricting shore leave, and increasing uncertainty, thereby

adversely affecting seafarers' psychological wellbeing. Studies have also shown that occupational stress negatively affects job satisfaction, work performance, decision-making, interpersonal relationships, and physical health. High levels of stress have been associated with depression, anxiety, burnout, fatigue, insomnia, substance use, emotional exhaustion, and reduced psychological well-being. Furthermore, organizational factors such as poor leadership, inadequate social support, effort-reward imbalance, and limited access to mental health services contribute to poor psychological outcomes. At the same time, protective factors such as resilience, supportive leadership, team cohesion, adequate work-rest schedules, and effective coping strategies have been found to improve psychological well-being among seafarers. Counselling psychology therefore has an important role in promoting resilience, reducing occupational stress, strengthening coping skills, and improving overall mental health within the maritime workforce. Given the growing concern regarding the mental health of seafarers and the limited research available in many regions, it is important to examine the relationship between occupational stress and psychological well-being. The findings of the present study are expected to contribute to the development of effective counselling interventions, organizational policies, and mental health promotion programmes for seafarers.

1.2 Statement of the Problem

Seafarers are exposed to numerous occupational stressors, including prolonged separation from family, long working hours, fatigue, sleep disturbances, social isolation, and demanding working environments. These stressors may

negatively affect their psychological well-being, job performance, and quality of life. Although previous studies have documented high levels of stress, depression, anxiety, and burnout among seafarers, further research is needed to understand the relationship between occupational stress and psychological well-being. Therefore, the present study seeks to examine occupational stress and psychological well-being among seafarers

1.3 Need for the study

The mental health of seafarers has received increasing attention due to the demanding nature of maritime work. Despite this, access to psychological support remains limited, and many seafarers continue to experience untreated stress and emotional difficulties. Understanding occupational stress and its relationship with psychological well-being will help counsellors, psychologists, shipping companies, and policy makers develop evidence-based interventions that promote resilience, improve working conditions, and enhance mental health among seafarers.

1.4 Aim of the Study

To examine the relationship between occupational stress and psychological well-being among seafarers.

1.5 Objectives of the Study

To assess the level of occupational stress among seafarers, to assess the level of psychological well-being among seafarers. To examine the relationship between occupational stress and psychological well-being. To examine differences in occupational stress and psychological well-being based on selected demographic variables such as age, rank, and years of seafaring experience.

1.6 Research Questions

What is the level of occupational stress among seafarers?

What is the level of psychological well-being among seafarers?

Is there a significant relationship between occupational stress and psychological well-being?

Do demographic variables influence occupational.

2. Review of Literature

2.1 Introduction

Mental health is a fundamental component of overall health and wellbeing, influencing an individual's ability to manage stress, maintain relationships, perform occupational responsibilities, and adapt to life challenges. In occupational settings, mental health plays a crucial role in productivity, decision-making, safety, and quality of work. Workers exposed to high-demand environments are at increased risk of psychological difficulties when occupational demands exceed their coping resources. The maritime profession is considered one of the most challenging occupations due to its unique working and living conditions. Unlike most land-based workers, seafarers spend extended periods away from their families and social support networks while living and

working in confined environments. Their occupational responsibilities require them to maintain safety, manage emergencies, and perform physically and mentally demanding tasks under unpredictable environmental conditions. Seafarers experience several occupational stressors, including long working hours, irregular shift patterns, disrupted sleep cycles, fatigue, isolation, limited recreational activities, restricted shore leave, exposure to noise and vibration, and separation from family. Additionally, multicultural working environments may create challenges related to communication, adaptation, and interpersonal relationships among crew members from different cultural backgrounds. The psychological consequences of these occupational demands have gained increasing attention in maritime research. Studies have reported that seafarers experience elevated levels of occupational stress, depression, anxiety, burnout, loneliness, emotional exhaustion, and reduced psychological well-being. A review of research among maritime workers identified that stress, depressive symptoms, and burnout are among the most commonly reported psychological concerns among seafarers. The prevalence of these problems varies across studies due to differences in research methods, populations, assessment tools, and geographical locations. The mental health challenges faced by seafarers are not only personal concerns but also occupational safety issues. Psychological distress can affect concentration, decision-making ability, communication, teamwork, and performance, increasing the risk of accidents and errors at sea. Therefore, understanding the psychological factors affecting seafarers is essential for both individual well-being and maritime safety. The COVID-19 pandemic further highlighted the vulnerability of seafarers. Travel restrictions, delayed crew changes, prolonged contracts, quarantine requirements, and reduced opportunities for shore leave increased psychological pressure among maritime workers. Many seafarers experienced extended separation from their families, uncertainty about their return home, and increased concerns regarding physical health and job security. Although previous research has identified multiple risk factors affecting seafarers' mental health, there remains a need for further investigation into the relationship between occupational stress and psychological well-being. Understanding this relationship is particularly important from a counselling psychology perspective because it can guide the development of psychological interventions, resilience-building programmes, stress management strategies, and organizational support systems. The present study focuses on occupational stress and psychological wellbeing among seafarers. It aims to explore how work-related stressors influence psychological functioning and to identify factors that may contribute to better mental health outcomes among maritime professionals

2.2 Mental Health and Psychological Well-Being

2.2.1 Concept of Mental Health

Mental health refers to a state of emotional, psychological, and social well-being that enables individuals to cope effectively with daily challenges, work productively, develop meaningful relationships, and contribute to their communities. Mental health is not merely the absence of mental illness; rather, it includes positive functioning,

emotional regulation, resilience, and the ability to adapt to stressful situations. In occupational contexts, mental health influences how individuals perceive workplace demands, respond to challenges, interact with colleagues, and maintain performance. Employees working in high-pressure environments may experience psychological strain when workplace demands are excessive or when adequate resources and support are unavailable. For seafarers, maintaining good mental health is particularly important because their work environment involves prolonged isolation, responsibility for vessel safety, emergency situations, and limited access to immediate psychological support. Poor mental health may negatively influence not only individual functioning but also crew cooperation and maritime safety.

2.2.2 Psychological Well-Being

Psychological well-being refers to positive psychological functioning and the ability to experience meaning, personal growth, self-acceptance, autonomy, and effective relationships. Ryff's model of psychological well-being describes six important dimensions: Self-acceptance – having a positive attitude toward oneself.

- Positive relationships- developing meaningful and supportive relationships.
- Autonomy- maintaining independence and self-determination.
- Environmental mastery- managing life situations effectively.
- Purpose in life- having goals and a sense of direction.
- Personal growth- developing one's abilities and potential.

Among seafarers, psychological well-being may be influenced by factors such as social support, coping strategies, job satisfaction, resilience, and organizational climate. Supportive work environments can enhance psychological well-being, whereas prolonged exposure to stressors may reduce emotional functioning and increase vulnerability to mental health problems.

2.3 Occupational Stress

Among Seafarers Concept of Occupational Stress: Occupational stress refers to the psychological and physiological response that occurs when workplace demands exceed an individual's ability or resources to cope effectively. It develops when there is an imbalance between job requirements and the individual's perceived capacity to manage those demands. Occupational stress can influence emotional functioning, physical health, job satisfaction, productivity, and overall quality of life. In high-risk occupations, stress is often associated with increased responsibility, unpredictable situations, long working hours, and limited control over work conditions. While a certain level of stress may improve motivation and performance, prolonged or excessive stress can lead to psychological difficulties such as anxiety, depression, burnout, emotional exhaustion, and reduced work efficiency. The maritime profession represents a unique occupational environment where workers experience continuous exposure to multiple stressors. Seafarers not only perform occupational duties but also live within their workplace for extended periods. This overlap between work and personal life increases the impact

of occupational stress because there is limited opportunity for psychological separation and recovery.

Occupational Stress in the Maritime Environment

Seafaring is considered one of the most demanding occupations because of the combination of physical, psychological, and social challenges. Unlike workers in land-based occupations, seafarers often remain at sea for several months, resulting in prolonged separation from family, friends, and familiar social environments.

Major sources of occupational stress among seafarers include:

Long Working Hours and Workload Seafarers frequently work extended hours due to operational requirements, emergency situations, maintenance activities, and safety responsibilities. Long working periods with insufficient recovery time contribute to fatigue, reduced concentration, emotional exhaustion, and burnout. Research has shown that working more than nine hours daily is associated with increased psycho-emotional strain and burnout among maritime workers. Excessive workload may also reduce job satisfaction and increase intentions to leave the profession.

Isolation and Separation from Family Social isolation is one of the most significant psychological challenges experienced by seafarers. Spending months away from family members may result in loneliness, homesickness, emotional distress, and difficulties maintaining personal relationships. Limited communication opportunities, especially during earlier periods of maritime work, increased feelings of disconnection. Although modern technology has improved communication, emotional challenges related to prolonged absence from family continue to affect seafarers.

Sleep Disturbances and Fatigue Sleep problems are among the most commonly reported health concerns among seafarers. Irregular work schedules, night shifts, changing time zones, noise, vibration, and emergency duties disrupt normal sleep patterns. Chronic fatigue resulting from inadequate sleep has been identified as a major contributor to poor mental health.

Fatigue affects attention, decision-making, emotional regulation, and safety performance.

Poor sleep quality has been associated with: Psychological distress, Depression, Anxiety, Burnout, Reduced coping ability Environmental Stressors. The physical environment onboard ships create additional stress. Seafarers are exposed to: Continuous noise from engines and machinery, Ship vibration, Extreme weather conditions, Confined living spaces, Limited privacy, Motion of the vessel. Although these factors may appear primarily physical, prolonged exposure can contribute to psychological strain and reduced well-being.

Multicultural Working Environment Modern ships often employ crew members from different countries and cultural backgrounds. While diversity can provide valuable experiences, differences in language, communication styles, cultural expectations, and working practices may create interpersonal challenges. Poor communication and

interpersonal conflicts among crew members may contribute to stress, reduced teamwork, and poor work climate.

Safety Concerns and Occupational Risks Seafarers work in environments where accidents, equipment failure, severe weather, and piracy threats may occur. Constant awareness of potential danger can increase psychological pressure and anxiety. Concerns regarding ship safety, personal security, and emergency situations have been identified as important sources of work-related stress.

2.3.3 Theoretical Understanding of Occupational Stress Job Demands–Resources (JD-R) Model:

The Job Demands–Resources Model proposed by Demerouti and colleagues explains how workplace factors influence employee wellbeing. According to this model: Job Demands: Job demands are aspects of work requiring physical or psychological effort. Excessive job demands may lead to stress and burnout. Among seafarers, job demands include: long working hours, Heavy workload, Emotional pressure, Isolation, Sleep disruption, Responsibility for ship safety and Limited autonomy. Job Resources: Job resources help employees manage demands and promote motivation and well-being. Examples among seafarers include: Supportive leadership, Team cohesion, Adequate rest periods, Fair rewards, Career development opportunities, Effective communication. When job demands exceed available resources, psychological strain increases. However, sufficient resources can reduce stress and improve psychological well-being.

2.3.4 Impact of Occupational Stress on Seafarers

Prolonged occupational stress among seafarers can negatively influence multiple areas of functioning: Psychological Effects Depression, Anxiety, Burnout, Emotional, exhaustion, Irritability, Loneliness, Hopelessness, Suicidal thoughts, Physical Effects, Fatigue, Sleep problems, Increased risk of, chronic health conditions, reduced physical fitness, Occupational Effects, Reduced concentration, Poor decision-making, Increased errors, Reduced productivity, Increased accidents, Intention to leave the profession Therefore, occupational stress among seafarers represents not only an individual mental health concern but also a significant occupational safety issue.

2.4 Mental Health Problems among Seafarers

2.4.1 Overview of Mental Health Problems in Seafarers

Seafaring is associated with unique occupational challenges that place workers at increased risk of psychological difficulties. Unlike many occupations, seafarers live and work in the same environment for extended periods, resulting in continuous exposure to occupational demands without adequate separation between work and personal life. The combination of isolation, long working hours, fatigue, unpredictable working conditions, and limited access to psychological support contributes to increased vulnerability to mental health problems. Research conducted among international seafarers has consistently reported concerns related to stress, depression, anxiety, burnout, loneliness, emotional exhaustion, sleep disturbances, and suicidal ideation. A review of studies examining seafarer mental health found that psychological problems are influenced by

both individual factors and work-related environmental factors. These include age, physical health, coping ability, resilience, workload, leadership, organizational support, and working conditions. The International Transport Workers' Federation (ITF) Seafarers' Trust and Yale University study conducted in 2019 highlighted the seriousness of mental health concerns among seafarers. The study reported that a substantial proportion of surveyed seafarers experienced symptoms indicating depression and anxiety, with some reporting suicidal thoughts. These findings emphasized the need for increased attention toward psychological support and mental health interventions within the maritime industry.

2.4.2 Stress among Seafarers

Stress is one of the most frequently reported psychological problems among seafarers. Maritime workers experience stress due to the interaction between demanding job requirements and limited recovery opportunities. A scoping review of seafarer mental health studies reported that approximately 28% to 65% of seafarers experienced significant stress, although prevalence differed depending on measurement tools, sample characteristics, and research settings.

Common sources of stress include: Excessive workload, long working hours, Pressure from contractors and customers Ship safety responsibilities Fear of piracy Separation from family, financial concerns, Poor communication, Lack of autonomy Unclear work-rest schedules Stress may manifest through: Irritability, Emotional exhaustion, Difficulty concentrating, Reduced motivation, Sleep problems, Physical complaints. Studies have also found differences in stress levels based on occupational roles. Deck officers often report higher psychological stress because they carry greater responsibility for navigation, decision-making, administration, and crew management. In contrast, ratings and engine personnel may experience greater physical strain due to manual and technical duties.

2.4.3 Depression among Seafarers

Depression is one of the most concerning mental health outcomes reported among maritime workers. It is characterized by persistent sadness, loss of interest, reduced energy, feelings of hopelessness, guilt, and difficulties in daily functioning. Seafarers are particularly vulnerable to depressive symptoms because of: Prolonged separation from family, Loneliness, Limited social interaction, Chronic fatigue, Occupational uncertainty, Lack of psychological support. Research has reported that depressive symptoms among seafarers' range approximately between 14% and 49% across different studies. Variation in prevalence may occur due to differences in countries, assessment methods, job roles, and sample characteristics.

Depression among seafarers can negatively affect: Work performance, Decision-making ability, Safety behaviour, Relationships with crew members Overall quality of life. Studies have also identified physical health conditions as contributing factors. Seafarers with chronic illnesses such as type 2 diabetes and those with higher BMI were found to have increased risk of depressive symptoms. This highlights the importance of integrated physical and mental health screening onboard.

2.4.4 Anxiety among Seafarer

Anxiety involves excessive worry, fear, tension, and physiological symptoms that interfere with daily functioning. Seafarers may experience anxiety due to uncertainty, safety concerns, occupational responsibility, and isolation. Factors contributing to anxiety among seafarers include: Fear of accidents at sea, Concerns about ship safety Piracy threats, Job insecurity, Family-related worries, Health concerns during long voyages. Studies have reported significant levels of anxiety among seafarers, particularly during extended periods at sea and during the COVID19 pandemic. Restrictions on crew changes, quarantine procedures, and uncertainty regarding returning home increased anxiety levels among many maritime workers.

2.4.5 Burnout among Seafarers

Burnout is a psychological condition resulting from prolonged exposure to occupational stress. It is commonly characterized by: Emotional exhaustion Depersonalization or negative attitudes toward work Reduced sense of personal accomplishment Burnout is a major concern among seafarers because their work involves continuous responsibility, limited recovery time, and demanding operational conditions. Studies have reported burnout prevalence among seafarers around 10.8%, although rates vary according to job position and workplace conditions.

Factors associated with burnout include: Long working hours, High responsibility, Poor leadership, Lack of organizational support, Effort reward imbalance, Poor work-life balance. Officers may experience higher burnout because of increased decision-making responsibility and accountability. However, catering staff and other crew members may also experience burnout due to workload and limited control over their work environment.

2.4.6 Loneliness and Social Isolation

Loneliness and social isolation are important psychological challenges among seafarers. The restricted social environment onboard and prolonged separation from family can negatively affect emotional wellbeing. Social isolation may result in: Feelings of loneliness, Homesickness, reduced emotional support, Difficulty maintaining relationships, Lower life satisfaction. One study reported that approximately 30% of Danish seafarers experienced feelings of isolation or loneliness. These experiences became more prominent during the COVID-19 pandemic due to reduced shore leave and prolonged contracts.

Supportive communication with family, positive crew relationships, and supportive organizational policies may help reduce loneliness among seafarers.

2.4.7 Fatigue and Sleep Problems

Fatigue is considered one of the strongest contributors to mental health problems among seafarers. The nature of maritime work frequently disrupts normal sleep patterns due to: Shift duties, Night watches, Emergency situations, Noise, Vibration, long working hours. Sleep disturbances are associated with: Increased stress, Depression, Anxiety, Burnout, Reduced concentration, Increased accident risk. Because fatigue affects both psychological health and

maritime safety, improving work-rest schedules and sleep management is an important preventive strategy.

2.4.8 Suicidal Ideation and Self-Harm Risk

Severe psychological distress among seafarers may lead to suicidal thoughts and self-harm risk. Feelings of hopelessness, isolation, depression, and lack of access to mental health support contribute to increased vulnerability. The 2019 ITF Seafarers' Trust and Yale University study highlighted suicidal ideation as a serious concern among surveyed seafarers, emphasizing the urgent need for accessible psychological services, crisis support, and early identification of mental health difficulties.

2.5 Individual Factors Affecting Seafarers'

Mental Health Individual characteristics play an important role in determining how seafarers experience and cope with occupational stress. Factors such as age, work experience, physical health, sleep quality, and resilience influence psychological well-being.

2.5.1 Age and Seafaring Experience

Age and years of experience are associated with differences in stress and coping. Experienced seafarers may develop better coping strategies and adaptation skills, which can reduce stress levels. However, older seafarers may experience greater psycho-emotional strain due to increased responsibilities and health concerns. Younger and less experienced seafarers may face difficulties adjusting to life onboard, including isolation, unfamiliar work conditions, and limited decision-making authority.

2.5.2 Physical Health

Physical health conditions are closely related to psychological well-being. Studies indicate that conditions such as obesity, high BMI, and type 2 diabetes are associated with increased depressive symptoms among seafarers. Poor physical health may reduce coping ability and increase vulnerability to stress and emotional difficulties. Therefore, regular health monitoring and preventive care are important for seafarers.

2.5.3 Sleep Quality and Fatigue

Sleep problems are common among seafarers due to shift work, night duties, noise, and irregular schedules. Poor sleep quality is associated with: Increased stress, Emotional exhaustion, Burnout, Depressive symptoms, Reduced concentration. Adequate rest and proper work-rest schedules are important for maintaining mental health and occupational safety.

2.5.4 Smoking and Substance

Use Some seafarers use smoking as a coping mechanism to manage stress and boredom during long voyages. Although smoking may provide temporary relief, it can negatively affect physical health and does not address underlying psychological stress.

2.5.5 Resilience and Coping Strategies

Resilience refers to the ability to adapt and recover from stressful situations. Studies show that higher resilience is associated with lower stress levels, better coping, and

improved job satisfaction among seafarers. Resilience training and psychological skills programmes may help seafarers manage occupational challenges effectively.

Summary. Individual factors such as health status, sleep quality, experience, and resilience significantly influence seafarers' mental health. Strengthening protective factors and improving health behaviours can reduce the impact of occupational stress.

2.6 Work Environmental Factors Affecting Seafarers' Mental Health

Work-related conditions strongly influence the psychological wellbeing of seafarers. High job demands and limited workplace support increase the risk of stress and burnout.

- **Workload and Long Working Hours** Heavy workload and extended working hours increase stress and fatigue. Working more than 9 hours daily is associated with burnout and emotional strain.
- **Isolation and Separation from Family** Long periods away from family contribute to loneliness and homesickness. Limited social interaction affects emotional well-being.
- **Work Environment** Noise, vibration, confined spaces, and harsh weather conditions create physical and psychological stress. Poor living conditions reduce comfort and job satisfaction.
- **Work Schedule and Fatigue** Irregular shifts and inadequate rest disturb sleep patterns. Fatigue affects concentration, decision-making, and safety.
- **Job Role and Responsibility** Deck officers often experience higher mental stress due to decision-making responsibilities. Ratings and engine personnel experience greater physical demands.
- **Leadership and Social Support** Supportive supervisors and good teamwork reduce stress. Poor leadership and lack of organizational support increase burnout.
- **Effort–Reward Imbalance** Lack of recognition, career growth, or fair rewards contributes to stress. Fair salary, benefits, and promotion opportunities improve job satisfaction.

Summary Work demands, environmental conditions, and organizational support play an important role in determining seafarers' mental health. Improving workplace resources can reduce stress and promote psychological well-being.

2.7 Protective Factors

Resilience, Coping, and Social Support Among Seafarers, Protective factors help seafarers manage occupational stress and maintain psychological well-being despite challenging working conditions.2.7.1 Resilience helps individuals adapt to stressful situations. Higher resilience is associated with lower stress and better job satisfaction. Resilience training can improve coping abilities among seafarers.2.7.2 Coping Strategies; Effective coping strategies reduce the negative effects of occupational stress. Healthy coping includes problem-solving, relaxation techniques, physical activity, and seeking support. Maladaptive coping, such as smoking or substance use, may increase health risks.2.7.3 Social Support; Support from family, colleagues, and supervisors improves emotional well-being. Team cohesion reduces

loneliness and workplace stress. Poor communication and lack of support increase psychological distress.2.7.4 Organizational Support; Supportive leadership improves job satisfaction and reduces burnout. Adequate rest periods, fair rewards, and mental health services promote well-being.

Summary

Resilience, effective coping, social support, and organizational resources act as protective factors that reduce the impact of occupational stress and improve seafarers' psychological well-being.

2.8 Theoretical Framework

This study is based on two theories that explain how occupational stress affects psychological well-being among seafarers.

2.8.1 Job Demands–Resources (JD-R) Model the Job Demands–Resources (JD-R) Model explains that employee well-being depends on the balance between job demands and job resources. Job Demands, these are aspects of work that require physical or mental effort. Examples: Long working hours, Heavy workload, Fatigue, Noise and vibration, Separation from family, Limited shore leave. Job Resources: These are factors that help employees manage work demands. Examples: Supportive leadership, Teamwork, Social support, Adequate rest, Fair salary and rewards

Application to the Study: When job demands are high and resources are low, seafarers are more likely to experience occupational stress and reduced psychological wellbeing.

2.8.2 Transactional Model of Stress and Coping the Transactional Model of Stress and Coping, developed by Lazarus and Folkman (1984), explains that stress depends on how individuals perceive and cope with challenging situations. Primary Appraisal, the individual evaluates whether a situation is stressful or threatening. Secondary Appraisal. The individual assesses whether they have the resources to cope with the situation. Coping People use different coping strategies, such as: Problem-focused coping, Emotion focused coping, seeking social support, Application to the Study: Seafarers with effective coping skills and higher resilience are more likely to manage occupational stress and maintain better psychological well-being.

Summary

The JD-R Model explains the effect of workplace demands and resources, while the Transactional Model explains how individual coping influences stress. Together, these theories provide a strong framework for understanding occupational stress and psychological well-being among seafarers

3. Research Methodology

3.1 Introduction

This chapter describes the methodology used to study mental health, occupational stress, and psychological well-being among seafarers. The study was conducted while the researcher was onboard a vessel, allowing data to be collected directly from seafarers within their actual work and

living environment. This chapter presents the research design, objectives, hypotheses, participants, sampling, inclusion and exclusion criteria, tools, data collection procedure, ethical considerations, and statistical analysis.

3.2 Aim of the Study

The aim of the study was: To assess occupational stress and psychological well-being among seafarers and identify factors associated with their mental health.

3.3 Objectives of the Study

- To assess the level of occupational stress among seafarers.
- To assess the level of psychological well-being among seafarers.
- To examine the relationship between occupational stress and psychological well-being.
- To examine differences in occupational stress based on selected demographic and occupational factors.
- To identify major work-related factors associated with mental health problems.
- To identify protective factors such as resilience, social support, and coping.

3.4 Research Questions

- What is the level of occupational stress among seafarers?
- What is the level of psychological well-being among seafarers?
- Is occupational stress related to psychological well-being?
- Does occupational stress differ according to selected demographic and occupational factors?
- What factors contribute to mental health difficulties among seafarers?

3.5 Hypotheses

H1: There will be a significant relationship between occupational stress and psychological well-being among seafarers.

H2: There will be a significant difference in occupational stress across different levels of seafaring experience.

H3: There will be a significant difference in psychological wellbeing across different levels of seafaring experience.

H4: There will be significant differences in occupational stress across selected demographic and occupational groups.

H0: There will be no significant relationship between occupational stress and psychological well-being among seafarers.

3.6 Research Design

The study adopted a quantitative, cross-sectional research design. A quantitative approach was selected because the study involved collecting numerical data through standardized psychological questionnaires and analysing the scores statistically. The study was cross-sectional because the data were collected from the participants during a specific period rather than following the same participants over a long period. The study also included a correlational and comparative component. Correlation was used to examine the relationship between occupational stress and

psychological well-being, while comparative analysis was used to examine differences between groups.

3.7 Research Setting

The research was conducted onboard a seagoing vessel during the researcher's period onboard. The onboard environment was considered particularly relevant because seafarers live and work in the same environment for extended periods. Their occupational conditions may include: long working hours, Shift duties, Physical workload, Noise and vibration, Confined living spaces, Limited shore leave, Separation from family, Restricted social interaction, Irregular sleep, Fatigue, Work-related pressure. Collecting data onboard allowed the researcher to approach participants directly within their natural occupational environment.

3.8 Participants

The participants consisted of seafarers working onboard the vessel during the data-collection period. For the statistical practice data-set used in this dissertation, the sample consisted of 200 seafarers. Participants belonged to different age groups and had varying levels of seafaring experience. This allowed the researcher to examine whether occupational stress and psychological well-being differed according to relevant characteristics.

3.9 Sampling Technique

A convenience sampling technique was used. Participants who were available onboard during the data-collection period and met the inclusion criteria were invited to participate. Convenience sampling was considered practical because access to seafarers is often restricted by sailing schedules, work duties, vessel operations, and limited opportunities to access crew members.

3.10 Inclusion Criteria

Participants were included if they: Were adults. We're working as seafarers onboard the vessel. Had experience of working in the maritime environment. Were able to understand the questionnaire. Voluntarily agreed to participate. Provided informed consent.

3.11 Exclusion Criteria

Participants were excluded if they: We're not seafarers. Were unable to understand the questionnaire. Did not provide informed consent. Returned substantially incomplete questionnaires. Did not wish to participate.

3.12 Demographic Information

Brief demographic and occupational information form was used. To protect confidentiality, participants were not asked to provide their name, employee ID, passport number, or other identifying information. The information included:

Age, Marital status, educational background, Years of seafaring experience, Duration of current contract, Average working hours, Average sleep duration, Frequency of shore leave, contact with family, Perceived social support, Physical

activity, Smoking status, General physical health. These variables were selected because they may have an association with occupational stress and psychological well-being.

3.13 Research Instruments

The study used a demographic information form and standardized psychological measures.

3.13.1 Demographic Information Form: A researcher-developed form was used to obtain relevant demographic, occupational, and lifestyle information. The form focused on factors potentially associated with seafarers' mental health while avoiding personally identifying information.

3.13.2 Occupational Stress Scale: A standardized occupational stress measure was used to assess work-related psychological stress. The measure assesses areas such as: Workload, Work pressure, Role-related stress, Interpersonal relationships, Organizational conditions, Job demands, Work environment, Higher scores indicate greater occupational stress according to the scoring procedure of the selected scale.

3.13.3 Psychological Well-Being Scale: A standardized psychological well-being measure was used to assess participants' psychological functioning. The assessment covers areas such as: Self-acceptance, Positive relationships, Environmental mastery Purpose in life, Personal growth and Autonomy. Higher scores indicate better psychological well-being according to the scoring guidelines of the selected instrument.

3.14 Data Collection Procedure

The data collection was conducted directly onboard the vessel. First, the researcher identified eligible participants among the seafarers onboard. The purpose and nature of the research were explained to them in simple and understandable language. Participants were informed that participation was voluntary and that their responses would remain confidential. After obtaining informed consent, the questionnaires were provided to the participants. The participants completed the questionnaires based on their own experiences and perceptions. The researcher remained available to clarify the instructions or meaning of questionnaire items, when necessary, without influencing participants' answers. Participants were given adequate time to complete the questionnaires according to their work schedules. After completion, the questionnaires were collected and checked for completeness. No names or employee identification details were collected.

3.15 Researcher's Role Onboard

The researcher was physically present onboard the vessel during the data-collection period. This provided an opportunity to interact directly with the seafarers and observe the general occupational environment in which they lived and worked. The researcher maintained a neutral and non-judgmental approach during data collection. The researcher did not suggest answers, interpret questions for participants in a way that could influence their responses, or pressure them to participate. The researcher only provided

clarification regarding questionnaire instructions when required.

3.17 Ethical Considerations

Ethical principles were followed throughout the research. Informed Consent: Participants were informed about the purpose and procedure of the study before completing the questionnaires. Voluntary Participation: Participation was completely voluntary. Confidentiality: Individual responses were kept confidential and were used only for research purposes. Anonymity: Participants were not required to provide their names, employee IDs, or other identifying information. Right to Withdraw: Participants were informed that they could withdraw from the study without penalty. Privacy: Participants were encouraged to complete the questionnaire privately and answer honestly. Psychological Safety: Because the study included questions related to stress and mental health, participants could choose not to answer questions that caused discomfort. If a participant demonstrated significant psychological distress, appropriate support or referral would be recommended according to the relevant institutional and professional procedures.

3.18 Data Analysis

The collected data were entered and analysed using IBM SPSS Statistics. The following statistical techniques were used:

- Descriptive Statistics
- Frequency, percentage, mean, and standard deviation were used to describe the participants and their psychological scores.
- Pearson Correlation
- Pearson's correlation coefficient was used to examine the relationship between occupational stress and psychological wellbeing.
- Independent Samples t-Test
- An independent samples t-test was used when comparing the mean scores of two groups.
- One-Way ANOVA
- One-way Analysis of Variance (ANOVA) was used to compare mean occupational stress or psychological well-being scores across three or more groups. For example, occupational stress could be compared across different levels of seafaring experience.

The significance level was set at: $p < .05$ A p-value below .05 was considered statistically significant. Post-Hoc Analysis. When ANOVA produced a statistically significant result, an appropriate post-hoc test such as Tukey's HSD could be conducted to identify which specific groups differed from one another.

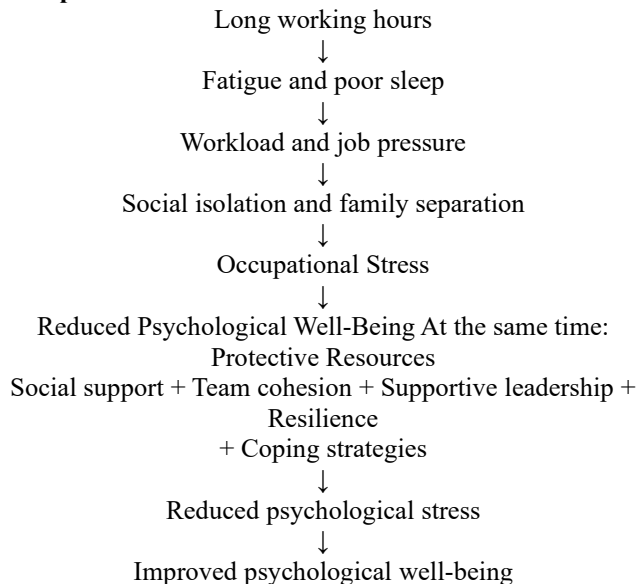
3.19 Data Management

After collection, questionnaires were checked for completeness. The responses were coded and entered into SPSS. The dataset was stored securely and used only for research purposes. Participant confidentiality was maintained throughout the process.

3.20 Conceptual Framework:

The study was guided by the Job Demands–Resources (JD-R) Model. According to this framework, occupational demands can increase psychological strain, while job resources can protect individuals from negative outcomes.

Occupational Demands



This framework is particularly relevant to seafarers because their mental health is influenced by both the demands of their work and the resources available to them onboard.

3.21 Statistical Interpretation df: Degrees of freedom

F: F-statistic

Sig.: Significance value or p-value for example:

> F (3,196) = 4.16, p = .007

This indicates that the difference between the groups was statistically significant because .007 is less than .05.

For the practice dataset containing 200 seafarers: Total df = 199. Between-group df = 3 when there are four groups Within-group df = 196

3.22 Chapter Summary

This chapter described the methodology used to examine occupational stress and psychological well-being among seafarers. The study used a quantitative cross-sectional design, with data collected directly onboard a vessel. Seafarers who met the inclusion criteria were invited to participate voluntarily. Demographic information and standardized psychological measures were used for data collection. Confidentiality, anonymity, informed consent, voluntary participation, and the right to withdraw were maintained throughout the research. The collected data were analysed using descriptive statistics, person correlation, t-test, and one-way ANOVA.

4. Results and Interpretation

Introduction

This chapter presents the results of the study examining occupational stress and psychological well-being among seafarers. The data were analysed using descriptive statistics, Pearson correlation, independent samples t-test, and one-way ANOVA. The findings are presented according to the objectives of the study.

4.1 Descriptive Findings

The findings indicated that the participants experienced a moderate level of occupational stress. The overall occupational stress score was $M = 71.82$, $SD = 9.48$. Psychological well-being was also found to be at a moderate level, with a mean score of $M = 66.37$, $SD = 8.91$. These findings suggest that although seafarers may experience considerable occupational stress, they may also maintain a moderate level of psychological well-being through coping strategies, resilience, work experience, and social support.

4.2 Relationship Between Occupational Stress and Psychological Well-Being

Pearson correlation was conducted to examine the relationship between occupational stress and psychological well-being. The results showed a significant negative relationship between occupational stress and psychological well-being, $r = -.624$, $p < .001$. This indicates that higher occupational stress was associated with lower psychological well-being. Therefore, increased workload, fatigue, poor sleep, isolation, and other occupational stressors may negatively influence the psychological functioning of seafarers.

4.3 One-Way ANOVA Based on Years of Seafaring Experience

A one-way ANOVA was conducted to determine whether occupational stress differed significantly according to years of seafaring experience.

ANOVA Table: Occupational Stress by Years of Experience

Source	Sum of squares	Degree of freedom	Mean square	F-value	Significance
Between Groups	610.45	3	203.48	4.16	.007
Within groups	9584.20	196	48.90		
Total	10194.65	199			

The results showed a statistically significant difference in occupational stress across different levels of seafaring experience, $F(3, 196) = 4.16$, $p = .007$.

This suggests that the level of occupational stress varies according to seafaring experience. Less experienced seafarers may experience greater adjustment difficulties because of unfamiliarity with the onboard environment, separation from family, and adaptation to maritime work routines. With increasing experience, individuals may develop better coping strategies and familiarity with occupational demands.

4.4 One-Way ANOVA Based on Years of Experience and Psychological Well-Being

A one-way ANOVA was also conducted to determine whether psychological well-being differed according to years of seafaring experience.

ANOVA Table: Psychological Well-Being by Years of Experience

Source	Sum of squares	Degree of freedom	Mean square	F-value	Significance
Between Groups	512.61	3	170.87	3.21	.024
Within groups	10435.72	196	53.24		
Total	10948.33	199			

The results indicated a significant difference in psychological well-being across different levels of seafaring experience, $F(3, 196) = 3.21, p = .024$.

This finding suggests that experience at sea may influence psychological well-being. Experienced seafarers may have developed greater psychological preparedness, coping strategies, and familiarity with the challenges of maritime life.

4.5 ANOVA Based on Age Groups

A one-way ANOVA was conducted to examine whether occupational stress differed across different age groups.

ANOVA Table: Occupational Stress by Age

Source	Sum of squares	Degree of freedom	Mean square	F-value	Significance
Between Groups	421.36	3	140.45	2.91	.036
Within groups	9462.18	196	48.28		
Total	9883.54	199			

The results indicated a statistically significant difference in occupational stress among different age groups, $F(3, 196) = 2.91, p = .036$. This finding suggests that age may influence how seafarers perceive and manage occupational stress. Younger seafarers may experience greater difficulty adjusting to the maritime environment, whereas older seafarers may experience stress related to prolonged occupational demands and responsibilities.

4.6 ANOVA Based on Contract Duration

A one-way ANOVA was conducted to determine whether occupational stress differed according to the duration of the seafarers' contracts.

ANOVA Table: Occupational Stress by Contract Duration

Source	Sum of squares	Degree of freedom	Mean square	F-value	Significance
Between Groups	735.22	3	245.07	5.08	0.002
Within groups	9459.43	196	48.26		
Total	10194.65	199			

The results showed a significant difference in occupational stress based on contract duration, $F(3, 196) = 5.08, p = .002$. Longer periods away from home may increase loneliness, homesickness, fatigue, and emotional exhaustion. Therefore, extended contracts may contribute to greater occupational stress among seafarers.

4.7 Overall Interpretation of ANOVA Findings

The ANOVA findings indicate that occupational stress and psychological well-being may vary according to important demographic and occupational characteristics.

Significant differences were observed according to: Age, Years of seafaring experience, Contract duration, these findings highlight that seafarers are not a homogeneous group and that their psychological experiences may differ according to their personal and occupational circumstances.

4.8 Summary of Major Findings

The major findings of the study were: Seafarers demonstrated a moderate level of occupational stress. Seafarers demonstrated a moderate level of psychological well-being. Occupational stress had a significant negative relationship with psychological well-being. Occupational stress differed significantly according to years of seafaring experience. Psychological well-being differed significantly according to years of seafaring experience. Occupational stress differed significantly across age groups. Occupational stress differed significantly according to contract duration.

5. Discussion, Conclusion, Limitations, And Recommendations

This chapter discusses the findings of the study on occupational stress and psychological well-being among seafarers. The discussion is based on the literature reviewed in previous chapters and highlights the major psychological challenges faced by seafarers, the factors influencing their mental health, and the importance of interventions to improve their well-being.

5.1 Discussion

The findings of this review indicate that seafaring is one of the most psychologically demanding occupations. Seafarers are exposed to prolonged periods away from home, long working hours, irregular shifts, physical fatigue, and social isolation. These occupational demands increase the risk of stress, anxiety, depression, burnout, and emotional exhaustion. The review found that a considerable proportion of seafarer's experience symptoms of depression, anxiety, and suicidal ideation. These findings suggest that mental health concerns are common within the maritime industry and require greater attention from shipping companies, healthcare professionals, and policymakers. Fatigue emerged as one of the strongest contributors to poor mental health. Long working hours, inadequate sleep, and continuous work demands reduce physical and emotional functioning, making seafarers more vulnerable to psychological distress. The review also identified several work-related factors affecting mental health, including heavy workload, lack of shore leave,

communication difficulties, multicultural working environments, poor leadership, and limited organizational support. These factors may reduce job satisfaction and increase emotional strain. At the individual level, resilience, effective coping strategies, and previous seafaring experience were identified as protective factors. Seafarers with higher resilience were better able to adapt to occupational challenges and maintain psychological wellbeing. The COVID-19 pandemic further highlighted the vulnerability of seafarers. Travel restrictions, delayed crew changes, and limited access to healthcare increased stress and uncertainty, emphasizing the need for accessible mental health services in the maritime sector. Overall, the review demonstrates that improving psychological wellbeing requires both individual coping strategies and organizational commitment to creating healthier working environments.

5.2 Practical Implications

The findings of this review have several practical implications: Shipping companies should implement regular mental health screening and awareness programs. Stress management and resilience training should be included in preboarding and onboard training. Adequate rest periods and reasonable working hours should be maintained to reduce fatigue. Access to confidential counselling and psychological support services should be available. Teamwork, supportive leadership, and open communication should be encouraged to reduce workplace stress. Health promotion programs focusing on physical activity, healthy eating, and smoking cessation should be implemented. These measures may improve both psychological well-being and work performance among seafarers.

5.3 Limitations of the Study

The present study has several limitations: The study is based on previously published literature rather than primary data. Most reviewed studies used cross-sectional designs, limiting conclusions about cause-and-effect relationships. Many studies relied on self-report questionnaires, which may be affected by response bias. The reviewed studies were conducted in different countries using different assessment tools, making direct comparison difficult. Differences in vessel type, job role, and cultural background may influence mental health outcomes but were not consistently reported across studies.

5.4 Recommendations

Based on the findings, the following recommendations are suggested: Conduct longitudinal studies to understand changes in seafarers' mental health over time. Evaluate the effectiveness of resilience training and psychological interventions. Develop mental health policies specifically for the maritime industry. Improve onboard communication and access to digital mental health services. Encourage routine psychological assessment during medical examinations. Promote healthy lifestyle practices, including regular exercise, balanced nutrition, and adequate sleep. Increase opportunities for shore leave and strengthen social support systems whenever operationally possible.

5.5 Conclusion

The review concludes that occupational stress is a significant concern among seafarers and has a substantial impact on psychological wellbeing. Long working hours, fatigue, poor sleep, isolation, separation from family, workload, and limited organizational support contribute to increased stress and mental health problems. At the same time, resilience, effective coping strategies, supportive leadership, and organizational resources can help reduce psychological distress and improve well-being. Addressing mental health in the maritime industry requires collaborative efforts from shipping companies, healthcare professionals, maritime organizations, and policymakers.

Promoting psychological well-being is not only beneficial for individual seafarers but also improves safety, job satisfaction, work performance, and the overall efficiency of maritime operations. Continued research and evidence-based mental health interventions are essential to support the long-term well-being of seafarers.

References

- [1] Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32. <https://doi.org/10.1080/1364557032000119616>
- [2] Hystad, S. W., & Eid, J. (2016). Sleep and fatigue among seafarers: The role of environmental stressors, duration at sea, and psychological capital. *Safety and Health at Work*, 7(4), 363–371. <https://doi.org/10.1016/j.shaw.2016.05.006>
- [3] Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.
- [4] Lefkowitz, R. Y., & Slade, M. D. (2019). *Seafarer Mental Health Study*. ITF Seafarers' Trust & Yale University.
- [5] Lefkowitz, R. Y., Slade, M. D., & Redlich, C. A. (2019). Rates and occupational characteristics of international seafarers with mental illness. *Occupational Medicine*, 69(4), 279–282. <https://doi.org/10.1093/occmed/kqz069>
- [6] Lucas, D., Jago, C., Jensen, O. C., Canals, M. L., Schlaich, C., & Oldenburg, M. (2021). Seafarers' mental health in the COVID-19 era: Lost at sea? *International Maritime Health*, 72(2), 138–141.
- [7] Oldenburg, M., & Jensen, H. J. (2019). Potentially traumatic experiences of seafarers. *Journal of Occupational Medicine and Toxicology*, 14, Article 17. <https://doi.org/10.1186/s12995-019-0238-9>
- [8] Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069–1081. <https://doi.org/10.1037/0022-3514.57.6.1069>
- [9] Srivastava, A. K., & Singh, A. P. (1981). *Manual of the Occupational Stress Index*. Manovaiyanik Parikshan Sansthan.
- [10] World Health Organization. (2022). *World mental health report: Transforming mental health for all*. World Health Organization. These are appropriate, citable sources for

an MSc dissertation. They include the seminal works on stress and psychological well-being, the Occupational Stress Index manual, and key seafarer mental health publications, including the 2019 ITF Seafarers' Trust–Yale University report documenting the commonly cited findings of 25% depression, 17% anxiety, and 20% suicidal ideation among surveyed seafarers.