ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

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Assessment of Effect of Stress onSeafarers Performance: The Case of Ethiopian Shipping and Logistics Service Enterprise

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DECLARATION

I the under signed declare that this thesis entitled, “Assessment ofEffect of Stress on Seafarers Performance, The Case of Ethiopian Shipping and Logistics Service Enterprise.” Is my original work and to the best of my knowledge and has not been presented for a degree by any other person, and that all the sources of material used for the thesis have been duly acknowledged

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STATEMENT OF CERTIFICATION

This is to certify that,the thesis carried out by Mr. Hailemariam AberaBekele on the topic entitled, "Assessment of Effect of Stress on Seafarers Performance, The Case of Ethiopian Shipping, and Logistics Service Enterprise."Original work is his own work and suitable for submission for the award of Masters of Art Degree in Human Resource Management.

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This is to certify that, the thesis carried out by Mr. Hailemariam Abera Bekele on the topic entitled, "Assessment of Effect of Stress on Seafarers Performance, The Case of Ethiopian Shipping, and Logistics Service Enterprise." A thesis submitted to Addis Ababa University, school of commerce, department of human resource management in partial fulfillment of the requirements for the award of the degree of Master of Art in human resource management, complies with the regulation of the university and meets the accepted standards with respect to originality and quality.

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ESLSE	Ethiopian Shipping and Logistics Services Enterprises
SE	Seagoing employee
PJCT	Psychological Job Control Theory
MWFPT	Motivation and Work-Family Perspectives Theory
PTC	Psychoanalytic Theory on Counseling
IMO	International Maritime Organization's

ABSTRACT

The primary objective of this study was to assess how physical, social, psychosocial, and high work demand stressors effect on seafarers' performance: The target population of the study was approximately 452 people that included deck, engine, and catering departments. Questionnaire was the major instrument used to obtain primary data from the respondents; while the secondary data obtained from existing empirical literature relevant to the study. The study employed an explanatory approach using a descriptive survey design. The questionnaire was designed using Likert scale type. A sample of 80 respondents obtained through a stratified sampling technique of which 56 of the respondents participated in the survey. Data analyzed using the Statistical Package for Social Sciences (SPSS) and Microsoft Excel 2013. The result of the analysis indicated that, physical stressors, Psychosocial stressors, social stressors and high work demand were found to be exposing seafarers to stress and their management also has effect on the performance of the seafarers employee of ESLSE. Based on the findings of the study it recommended that investment on safety protection material and implementation new stress management and revision of the existing manuals, directives, and procedures to cop up with the situation.

Key Words: Work Place Stress Management Practice: A Case of Study Ethiopian Shipping & Logistics Service Enterprise

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

The shipping industry is a vital facilitator of world trade and it generally acknowledged that approximately 90% of world trade moves by sea (IMO 2015). For the success the shipping industry the participation, dedication and performance of the seafarers is very important. However, the different data shows the participation, dedication, and performance of the seafarers highly affected by stress because of many factors.

Seafaring is a particular profession, in which individuals commonly revealed to several stresses that connected to the different duties on board ships. A seafarer, being away from family has to endure limited social life, monotonous routines, and different working environment, which lead to different kinds of stress (Raunek, 2016).

Seafarers, also referred to as seamen, are mostly male workers who work from six to ten months onboard commercial or non-commercial vessels. The Ethiopian seafaring remains to be the top source country for seafarers supplying more than 95 percent of the Ethiopian maritime workforce. (ESLSE annual magazine, 2015).

Because of the nature of their work, a wider variety of experiences presented to the life of a seafarer. All the featurea\1` ss of the seafarer's life include travelling abroad, adventure, and seeing different ports (Akindehi et al., 2015).Stress defined as a psychological and physical reaction to prolonged internal and/or environmental conditions in which individual's adaptive capabilities over extended. It is an adaptive response to conscious or unconscious threat and can affect an individual emotional, physical and social wellbeing as well as pose a threat to one's health if not dealt with or managed well (Zaidi, 2015).

Job stress has documented, as one of the most important workplace health hazards for employees in developed and developing countries (Paul Spector, 2017). Workers who stressed are also more likely to be unhealthy, poorly motivated, less productive, and less safe at work. Their organizations are less likely to be successful in a competitive market (Cox, Griffiths, & Leka, 2015).

Stress may be acute or chronic in nature. It exists in different forms. It may be psychological, emotional, social, and occupational or job related. Stress experienced by workers at work called job stress. It may be due to a number of factors such as poor working condition, excessive work

load, shift work, long hours of work, role ambiguity, role conflicts, poor relationships, with the boss, colleagues or subordinate officers, risk and danger, to mention a few. Certain responses indicate the presence of job stress in an individual, or group. It may manifest by the presence of headache, sleep disturbances, difficulty in concentration, short temper, upset stomach, job dissatisfaction, and low morale (Selye, 2014).

Seafaring is associated with special mental, psychosocial, and physical stressors and not be compared with jobs ashore. The working and living conditions in seafaring are characterized by long-time separation from family and home for months, growing economic pressure as well as considerable and partly extreme psychosocial problems. (Paul Spector, 2015).

Workplace stress influencing seafarers has special features frequently distinct from stress that expected in other fields. These contain considerable potential hazards in the shape of incidents, injuries and illnesses (Carotenuto& Molino, 2016).

International Maritime Organization (IMO) guidelines define stress as "A reduction of physical and /or mental condition, resulting from physical stress. It may impair almost all psychophysical abilities including power, speed, reaction time, coordination, decision-making, and/or emotional balance. Stress is the result of prolonged working days with work watches, inadequate number of crew, and insufficient suitability of the inferior seafarers. |

On top of that, temporary lack of sleep causes a reduction of individual execution for at least three days subsequently to sleeping hours have get back to the ordinary 8 hours per night time without the reduction of performance being observed by the individuals themselves (SinWein.d).

Various factors can considered to contribute in generating distraction effects to seafarers on board ships, mostly through fatigue, stress, poor health, and poor attentions. The possible distractions factors exists on board may generated from various sources such as working and living conditions, interactions between human, individual factors, physical on board environment and also from food and nutrition supplied to them. (Othman, 2015).

With this, the study will assess the factors that contribute to stress in the work place/shipsand the stress management practiceand its effect on seafarer's employee performance Ethiopian Shipping and Logistics Service Enterprise.

Currently, Ethiopian Shipping and Logistics Service Enterprise have more than 452 seagoing employees under its three departments.In its deck department captain,officers, boson, able seaman ordinary seaman storekeeper and deck boys are available. In its engine department engineer, electrician, Motorman, fitter, wiper and engine boy are available and in its catering

department steward, cooker, laundryman, mess man. The Seafarers /seagoing employee include both Ethiopian and Expatriate seafarers. Expatriate seafarers are non-Ethiopian and from different African countries which are serving the Enterprise on contractual agreement.

1.2. Background of the Company

The Federal Government of Ethiopia has been merged the former four public enterprises that have been operating separately in a rather similar and interdependent maritime sub-sector; namely, Ethiopian Shipping Lines S.C, Maritime and Transit Services Enterprise, Dry Port Enterprise and Comet Transport SC. The Ethiopian Shipping and Logistics Services Enterprise (ESLSE for short) was the result of this merger. This newly amalgamated enterprise came into being following the issuance of Regulation by the Council of Ministers (Regulation No. 255/2011), and is vested with the huge responsibility of rendering sea-transport & logistics services to the country's importers, exporters, and investors in a more effective and efficient way, by reducing transit time, cost and handoffs.

The mission of the Enterprise is to contribute towards rapid economic growth of the nation through building and upgrading organizational capacity and rendering excellent competitive shipping & logistics services. Moreover, its vision is to become a reputable and preferred logistics company in Africa in 2025 by providing competitive shipping & logistics services.

The enterprise has four sectors led by the four-deputy CEO's, shipping sector, freight forwarding sector, port, & terminal sector and corporate services sector. The Enterprise has 30 departments and 11 branches, with 3241 permanent employees of whom 452 seagoing and 2789 shores based. Seagoing employee can defined as an employee of ESLSE who are currently working in different rank from Engine boy to Chief Engineer and from deck boy to Captain on permanent and contractual basis on in ESLSE own ships onboard. The Seafarers /seagoing employee include both Ethiopian and Expatriate seafarers. Expatriate seafarers are non-Ethiopian and from different African countries which are serving the Enterprise on contractual agreement.

Shore based employee can also defined as an employee of ESLSE who are currently working in different position in head office and different branch in land not on board.

1.3. Statement of the Problem

The first one, as per the ESLSE human resource management report from 2016 to 2020, 70% of the disciplinary issues reported from ships on board is related with excessive alcohol, disobedient, absenteeism, fighting with colleagues, work error, misuse of resource, lack of full

mandatory binding document because of this dismissal, demotion, salary fine, and low performance happened.

The second one, regardless of their rank all seafarer's must go through medical examination before take assignment on ESLSE own ships. As per the data from Doctor Abdurrahman Duri medical center 20% of the medical examination result of ESLSE seafarers found to be unfitted and those unfitted seafarers not assign on the ships.

The third one reported from the fleet crewing department of ESLSE out of the total seafarer's 30% has refused acceptance of assignment on ships as result exposed to dismissal, demotion, salary fine, and low performance.On the above-mentioned report, the root cause of the problem not yet assess on research-based studies.

1.4. Research Questions

This research answered the following research questions:

- ✓ Effects of physical stressors onperformanceof seafarer's?
- ✓ Consequences of social stressors on performance of seafarer's?
- ✓ Psychosocial stressors and their effect on performance of seafarer's?
- ✓ Effect of high work demand on performance of seafarer's?

1.5. Objective of the Study

1.5.1. General Objectives of the Study

The general objective of this study was to identify the effect ofphysical, social, psychosocial, and high work demand stressors on the performance of seafarer's.

1.5.2. Specific Objectives of the Study

- ✓ To assesseffects of physical stressors on performance of seafarer's
- ✓ To examineconsequences of social stressors on performance of seafarer's
- ✓ To investigatepsychosocial stressors and their effect on performance of seafarer's
- ✓ To assess effectsof high work demand on performance of seafarer's

1.6. Significance of the Study

This study was indeed significant because the seafarers are a vital facilitator of world trade in shipping industry.The findings from this research primarily benefited Ethiopian Shipping and Logistics Service Enterprise and its seafarer's employees by providing an in-depth knowledge on effect of stressor on performance of seafarer's.

Moreover, the study seeks to benefit all stakeholders and players within the shipping industry especially, human resource department, fleet crewing department and the Ethiopian maritime

authority. Finally, the research would be great benefit to government of Ethiopia, its neighboring countries and other African countries who have similar problems.

1.7. Scope of the Study

The study will cover ESLSE seafarer's employee who are currently working on board and those seafarers on leave. The study did not consider the shore base employee of the enterprise. The study targeted to get sample respondent from engine department, deck department and catering department of ESLSE ships.

The study used combination of data collection techniques/instruments to gather both primary and secondary data, which was qualitative and quantitative in nature. The study assessed both independent and dependent variable factors that contribute to seafarers stress and their performance on board. The independent variables were physical stressors, psychosocial stressors, social stressors, and high work demands while the dependent variable was the performance of seafarer's employees.

1.8. Limitations of the Study

It is obvious that every study encounters challenges and difficulties of which this study is no exception. Insignificant portion of the questionnaire notproperly returned because of different reason of the respondents.Due to time and budget, constraint the study focused on seafarer's/seagoing employee of the enterprise only.

1.9. Definition of Terms

Job stress: is a situation wherein job-related factors interact with the worker to change his or her psychological and/or physiological condition such that the person forced to deviate from normal functioning. (Newman and Beehr, 2017)

Performance: performance of an employee at his/her workplace is a point of concern for all the organizations irrespective of all the factors and conditions. Consequently, the employees considered very important asset for their organizations. (Qureshi & Ramay, 2018)

Seafarer: According to Black's law dictionary, Seafarer defined as shipboard crew personnel involving Ships' Officers and seamen/ratings.

Engine department or engineering department: is an organizational unit aboard a ship that is responsible for the operation, maintenance, and repair of the propulsion systems and the support systems for crew, passengers, and cargo (ESLSE Seagoing personnel manual, 2016)

Deck department: is an organizational team on board naval and merchant ships.

The department and its manning requirements, including the responsibilities of each rank regulatedwithin theSTCWConvention. (ESLSE Seagoing personnel manual, 2016)

Catering department is responsible for preparation and serving of foods to the crew on board of a ship. (ESLSE Seagoing personnel manual, 2016)

1.10. Organization of the Research Report

The research report will consist five chapters and it will organize as follows. The first chapter will be an introductory part in which background of the study, statement of the problem, basic research questions, objectives of the study, significance of the study, scope of the study, definition of terms and organization of the research report will be presented. Chapter 2 will present review of both theoretical and empirical literature on An Assessment of Stress on Ship and its Effect on Performance of Seafarers. Subsequently, methods of the study will be present in Chapter 3. Then, Chapter 4 will summarize and discuss the finding of the study. Finally, on Chapter 5, the main findings of the study will be summarize and conclusions will be drawn based on the results of the study and at last, the paper will forward appropriate recommendations and policy implications.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

This chapter presents the literature reviewed in areas related to the objectives of the study. It focuses on the theoretical and empirical literature review by defining of stress and their effects on performance. It then presents the extant literature on how physical stressors, psychosocial stressors and social stressors related to the safety and health policy of the company and their contribution to stress and how they affect the performance of seagoing employee. The study also looked at the conceptual framework, theories on existing literature, summary and research gap.

2.1. Theoretical Literature Review

This chapter of the study will provides in-depth insight on the nature of stress and the impact there on performance. Opinions from different authors will utilized to provide a better theoretical understanding of the nature of stress, its causes, and then the impact it will have on performance.

2.1.1. Definition of Stress

The term stress first employed in a biological context by the endocrinologist. (Hans Selye, 2016). He later broadened and popularized the concept to include inappropriate physiological response to any demand. In his usage, stress refers to a condition and the stressor to the stimulus causing it. It covers a wide range of phenomenon from mild irritation to drastic dysfunction that may cause severe health breakdown. After this different definition of stress are provide by different scholars and summarized as follow:

Stress defined as a psychological and physical reaction to prolonged internal and/or environmental conditions in which individual's adaptive capabilities over extended. It is an adaptive response to conscious or unconscious threat and can affect an individual emotional, physical and social wellbeing as well as pose a threat to one's health if not dealt with or managed well (Zaidi, 2015).

According to International Labor Organization (ILO) 2017, it recognized stress as worldwide major challenge to individual mental and physical health, and organizational health. Stress is a universal element experienced by employees around the globe. Stress has become major problem for employer particularly in developing nations where the employer does not realize the impact of stress on employee performance. (Joseph, 2017).

Stress is a dynamic condition in which an individual confronted with opportunity, constraint, or demand related to what he desires and for which the outcome perceived to be both uncertain and

important. (Robbins, 2015) From this definition, one can say that stress is not necessarily bad; it also has a positive value when it offers potential gain.

This means the potential for stress exists when an environmental situation presents a demand threatening to exceed a person's capabilities and resources.

2.1.2. **Concept of Stress**

On the most general level, one can differentiate between four stress concepts: the stimulus concept; the response concept; the transactional concept; and the discrepancy concept.

The stimulus concept focuses on situational conditions or events. Within this conceptualization, certain stimuli are stressful, for example high time pressure, interpersonal conflict at work, or accidents. However, the stimulus concept is problematic because not all individuals react in a uniform manner to the same stressor. Nearly every situational condition or every event may evoke strain in some individuals. Although the stimulus conceptualization leads to conceptual problems, many researchers agree that there are subsets of stimuli, which evoke strain in most individuals (Brief & George, 2016)

The reaction concept focuses on physiological reactions as the crucial constituent of stress, i.e. stress exists if an individual shows a specific reaction pattern, irrespective of situational characteristics. However, this conceptualization also has its shortcomings. It does not take into account that very different situations can results in the same physiological responses and that an individual's coping efforts may have an effect on this individual's reactions, thus altering the stress response. (Sale, 2014)

The transactional concept brought forward by Lazarus (2014) assumes that stress results from a transaction between the individual and the environment, including the individual's perceptions, expectations, interpretations, and coping responses. In terms of operationalization and measuring stress in empirical studies, this concept did not fully develop its potential yet. Often, proponents of the transactional concept actually rely in their research practice exclusively on verbal responses or physiological measures of strain as indicators of stress. By doing so, they implicitly apply the reaction concept.

The discrepancy concept describes stress as an incongruence between what individual's desires and the environment (Edwards, 2010). However in operationalizing such a discrepancy, researchers face great difficulties. Thus, 'stress 'is a broad term which conveys a variety of meanings. To avoid ambiguity, we refer to 'stressors' and 'stress reactions' 'strain' throughout this chapter. For 'stress reactions' we use the term 'strains 'synonymously.

2.1.3. Nature of Stress

Stress occurs with the interaction between an individual and the environment, which produces emotional strain affecting a person's physical and mental condition. (Bowing and Harvey, 2011)

For years, stress described and defined in terms of external, usually physical, forces acting on an individual. Later, it was suggested that the individual's perception of, and response to, stimuli or events was a very important factor in determining how that individual might react, and whether or not an event will be considered stressful. These authors further contended that most researchers acknowledged that both external and internal factors affect stress. (Ritchie and Martin, 2009)

2.1.4. Stress at Sea

This kind of stress does not address exclusively psychological stress (because seafarers deal with stress in the frame of an organization) nor does it address merely organizational stress (the one that possibly mitigated unintentionally in a fewer or larger scope when the person departs the workplace). "Internal staff surveys indicate that 35 per cent of sea going personnel and 25.9 per cent of officer trainees report that there was too much stress associated with their job" (Fairbrother & Warn, 2008).

A realization of the causes of stress recognized in isolated confined environments such as the vessel has utilized to recognize prominent parts of workplace stress for seafarers. Physical annoyance is a prominent quality of vessels. Correspondingly, on board vessel exposed metal exteriors control in the physical workplace and seafarers endure constricted and noisy surroundings. Disclosure to environmental situations contain carrying out the task in lack of light, electromagnetic radiation, fuel, vapors, working near to chemicals, harsh motion and high temperature. Moreover, vessels are ideally distant from home and can include extended disconnection from friends and family. (Fairbrother & Warn, 2007).

Cadets, for example, have an occupied program on board vessel; their role is challenging and different because there are numerous secondary tasks that have to be included. The vagueness of the trainee role and the various work requirements show that task role is a possible cause of stress. Trainees can be stand opposite to overlapping requirements and discover that their tasks collide with their sleep and ability to maintain a uniform personal routine. Incompetent leadership, a collapse in the relationships between individuals and the consequence conflict can be extremely stressful inside the limits of a vessel. However, these are excessive occurrences and

show crises. Controlled by ideal functioning conditions in a vessel, these elements regulated largely by the existence of apparently known job roles. (Fairbrother & Warn, 2011)

2.1.5. Causes of Stress at Sea

International Maritime Organization (IMO) guidelines define stress as "A reduction of physical and /or mental condition, resulting from physical stress. It may impair almost all psycho-physical abilities including: power, speed, reaction time, coordination, decision making, and/or emotional balance." stress is the result of prolonged working days with work watches, inadequate number of crew, and insufficient suitability of the inferior seafarers. Work watches and unexpectedness, which are characteristic shape of life on board vessel, can lead up to fatigue and subsequently to serious hazard of casualties (Carontenuto & Molino & Fasanato & Amenta, 2016)

Loneliness: Social separation is a prime reason of psychological issues. Separation can cause sadness and hopelessness. Defenseless of seafarers has informed to be a reason of suicide. To be away from family is one of the major discouraging reasons specified by seafarers. "An interview was conducted on 134 seafarers showed that 59.7 per cent of them consider long separation from family as the main stress factor on board" (Carontenuto & Molino & Fasanato & Amenta, 2015). Stress degree raise significantly when several family individuals are not healthy or when communications with home are difficult (Carontenuto & Molino & Fasanato & Amenta, 2015).

Sleeping Disturbances: Sleep has established on pertaining to 24-hour cycles. If it is adversely affected it is potential to feel sleepy where as it is essential to be alert or to feel alert at the sleeping period. Great portions of seafarers relate not sleeping good to have constantly disturbed rest. Seafarer's task demands a watch system, which has an unfavorable influence on circadian rhythm. Working on 24-hour watch systems on ship on motion raises a number of impediments to acquire adequate renovated sleep. Seafarers may have to work extra hours, sleep when their bodies sense waken, and confront annoyance from vessel movement. Environmental causes of the vessel like hostile weather states, vibration, and noise can spoil sleep goodness. Sleep disorders linked to noise may differ relying on the space in which the seafarers sleep and on their age. Younger seafarers are widely sensible to noise and therefore more tending to sleep claims (Carontenuto & Molino & Fasanato & Amenta, 2016).

On top of that, temporary lack of sleep causes a reduction of individual execution for at least three days subsequently to sleeping hours have get back to the ordinary 8 hours per night time without the reduction of performance being observed by the individuals themselves (Sin Wei, n.d).

Multi-Nationality: Sensitivity to stress in the workplace connected to several factors, like shortage of supervision, discouragement, and unsociable relationships. These factors are entitled to trigger issues that can appear to the attendance of individuals of various nationalities and talking several languages on board the ship. Generally, crews consist of seafarers of various cultural backgrounds, various nationalities and religions (Carontenuto & Molino & Fasanato & Amenta, 2016).

Limited Recreation Activity: Seafarers frequently have short free time and this can develop stress. Sports, for instance, can contribute in enhancing psychological and physical welfare and hence could represent a chance to enhance collaboration, support team building, and promote social interactions (Carontenuto & Molino & Fasanato & Amenta, 2016).

Food or the Quality of Food:Food, or the quality of food, is another factor that contributes to the onslaught of stress in marine personnel. In a comparison of health-related behavior and stress at sea and ashore, seamen showed more frequent occurrences of and higher levels of stress at sea than ashore. (Sin Wei, n.d).

2.1.6. Seafarers' Job Performance

The job performance concept defined in several sources for some long decades. In 1990, Campbell related the job performance to the act of doing a job, defined it to reach a goal or set of goals inside of a job, role or organization. (Motowidlo and Kell ,2019) defined the concept as; "the total expected value to the organization of the discrete behavioral episodes that an individual carries out over a standard period of time ". When measuring and analyzing organizational performance as a whole, individual performance metrics are particularly important to understand the impact of various factors on occupational functioning, for why, organizational performance ultimately guided by job performance. When it comes to the seafarers, because of the extraordinary nature of their job, they supposed to receive standard training to be a qualified crew, according to the Seafarers' Training, Certification, and Watchkeeping (STCW) code and its amendments. However, competency of seafarers especially related with their job performance is not just about having knowledge and certificates; it requires the skills and experiences that only gathered year by year.

To understand the job performance metrics and its relations with various variables of seafarers, several studies conducted. Yuen et. al (2018) aimed to analyze main determinants of job performance and job satisfaction of seafarers and the results show that job satisfaction is significantly associated with seafarers' job performance.

Another study that aimed to discover the existing problems of seafarer recruitment process and to find out an efficient recruitment system for shipping companies carried out by. They found four primary dimensions that affect the seafarer's job performance namely; work attitude, loyalty, payment and welfare and opportunity. Performance improvements in seafarers have significant outputs, such as improving the return time of ships, meeting shipbuilders' productivity demands, and improving the safety performance of ship

2.1.7. Effects of Stress on Seafarers Performance

Stress has designated as a dangerous element because it inhibits work performance and is difficult to comprehend by people who frequently cannot discern their state of weariness (IMO guidance, 2006). Many studies have revealed the critical consequences of stress on work performance, resulting in a clear picture of the situation. The first effect is the loss of knowledge, facts, and steps in a sequence due to the individual's faults of consciousness and memory (MSC/Circ.1014, 2015). The second effect is the seafarer's significant danger while performing demanding tasks during navigation (Smith, 2012). In this case, a tired seafarer has constantly tried to find a quick solution to a problem and will put in less effort than is required to complete the work, resulting in poor decisions (Xhelilaj & Lapa, 2010). The effect of stress on an individual's ability to react, identify and interpret stimuli (driving force) in the workplace is another effect (Lapa, M.I.R. Suhrab 2010). Furthermore, weariness promotes indifference and lowers motivation at work, resulting in poor performance of seafarers (Xhelilaj, 2010). The last result is stress negative effect on problem solving and decision-making, both critical components of the maritime task (IMO, 2001). Overall, stress effect on work performance is critical to recognize and comprehend since it can jeopardize a seafarer's life and ship safety (Xhelilaj & Lapa, 2010). Finally, stress can impair seafarers' health by increasing their risk of chronic disease, as well as endangering their lives and the safety of their ships by significantly lowering their alertness levels and degrading their job performance (Wang, 2012)

2.1.8. The International Maritime Organization's (IMO) View of Stress

The International Maritime Organization (IMO) embraces wide rounded view to recognize the grounds of stress. It specifies that it must identify that the seafarer is an enslaved of his/her work atmosphere due to; firstly, while serving on board the vessel, there is no clear separation between work and recreation. Secondly, the regular seafarer spends between three to six months working and living away from home, on a moving vessel that is subject to irregular environmental factors or weather conditions. Thirdly, today's crew is composed of various nationalities, and religious,

cultural, and social backgrounds, who are expected to work and live together for extended periods of time. All these distinctive aspects are a combination of possible reasons for stress. (Parliament of the Commonwealth of Australia, 2011)

2.1.9. Related Theories of Stress

Both Cox and Griffiths (2009), created a framework that helps in evaluating the procedures of dealing with stressful situations. It is depended on the impact of an external stressor (Lazarus and Cohen, 2011). The model mainly focuses on the structural characteristics of the stress process. It considered which stressors most likely lead to which outcomes in which populations. However, transactional views are cognitive, and focus on the dynamic relationship that occurs between individuals and their environment in terms of mental and emotional processes (Cox et al., 2000).

This model studies more on cognitive approaches as opposed to G.A.S.-Seyles, it also considered as one of the most dynamic model that is able to cater on individual differences and detects other alternative methods when dealing with stress (Mark & Smith, 2008). Further, This model emphasis on enhancing the importance of stress-management, it also proposes various methods in managing psychological responses to stress (Sabrina, 2017).

This model has its own limitation and the main limitation of this model lies on its simplicity that does not consider environmental, biology and social factors. Another challenge is to conduct any experimental research where it covers on subjective aspects. Some psychologists even have their own doubts that it still needs to appraise and improves (Sabrina, 2017).

Many other theories also discussed in relation to stress and job performance. Vitamin Model (Warr, 2009) apparently explored and researched on couple of Dutch health care nurses and their aides (Jonge and Schaufeli, 2009)

This model assumed that, job autonomy, job demands and social support in workplace does relate to main three key pointers and they are satisfaction in job, anxiety related jobs and experiencing emotional exhaustion (Jonge & Schaufeli, 2011).

The strength of this model is that it challenges this belief of linear relationships, and a thorough literature evaluation done by Warr (2011) he featured 9 job characters that displayed potential causes of job stress /or mental health. These nine characters were included, amongst others and featured in the 'Job Characteristic Model' of (Hackman & Oldham, 2009) and the Demand, Control, Support (DCS) model of (Johnson & Hall 2005., Kerasek & Theorell, 2006), (Jonge & Schaufeli, 2008).Despite the popular premised of Vitamin model, until to date, little can be testified about the validity of the model. Both Sonnentag and Frese (2003) and Buunk et.al

(2009) declared that Vitamin model is unsatisfying and mixed, whilst van Veldhoven, Taris, de Jonge and Broersen (2005) testified that the model has yet to be empirically examined and the effect of support at workplace does not follow this model. Another disadvantage is that all studies have indicated unsuccessful to take in consideration of the multi-dimensional methods in which certain characteristic practiced in job may affect the job security (cf. Fletcher 2009)

The work stress model of, Cox's Transactional Model (Cox 2009), is almost related to the work of Lazarus and apparently many of the procedures in the two (2) models seems similar. However, there are some variances in the Cox model in particular a more elucidated structure and more emphasis on personal differences and on work-related health (Cox & Ferguson, 2009); Mark & Smith, 2008).What stresses in this model is the importance of the differences of an individual (Cox & Ferguson 2009)). On the other side, Cox model is quite similar to the Folkman and Lazarus model especially on the coping and appraisal. The issue with Cox model is it foresees nothing (Mark & Smith, 2008) the baseline of the hazard function is never actually assessed (Stack Exchange, 2017). Just like cognitive relational method, the complexity of the Cox's model figures that it is challenging to capture empirically unlike models like Karasek (2007).

The Demands-Control model (Karasek, 2009) is currently perhaps the most influential model of stress in the workplace (Kompier, 2003) and the original model focuses on the two (2) psychosocial job characteristics of job demands and job control. As per (Karasek, 2009) Karasek and Theorell, 2009)), many other studies demonstrated employee welfare through massive job demands via Demand-Control model. The Demands-Control model (Karasek, 2009) is currently perhaps the most influential model of stress in the workplace (Kompier, 2003) and the original model focuses on the two (2) psychosocial job characteristics of job demands and job control. As per Theorell, 2014), many other studies demonstrated employee welfare through massive job demands via Demand-Control model. One of the strength of this model is that if an employee is equipped with sufficient liberty in deciding the use of skills that are available to them, even though the jobs are highly stressful, it enables to adapt 'active-learning jobs' that is an effective manner in problem solving (Mark and Smith, 2008). Others have also criticize that the Demand-Control model only defines the basis of work load and not any other demand (Cox et al., 2014) and it assumes that the high control is always a desired state that can be argued. Some may not see that control in job not always desired and some may even find low sense of self-effectiveness by seeing control of the stressor is just within (Mark and Smith, 2008).

2.2. Empirical Literature

Workplace stress is becoming more and more expensive. It has several reasons, and these include sophisticated collection of psychological, physical, and social factors. Irrespective of what its exact type, stress in these days puts consequential pressures on organization to improve techniques for its efficient prevention and management (Blaug & Kenyon & Lekhil, n.d).

To reduce the damaging impacts of stress in both workers and organizations, organizations must endeavor to address and recognize the reasons of workplace stress. A cooperative approach by workers and organization to identify workplace stress should enhance the welfare and health of the workforce ("Medibank", 2010.)

Stressors are conditions and events that evoke strain (Kahn & Byosiere, 2014). Stressors can be single events such as critical life events or traumatic experiences and chronic problems, which continue over a longer period. The latter often are micro stressors, so-called 'daily hassles' (Kanner, Coyne, Schaefer, & Lazarus, 2011) which include for example daily difficulties with finishing one's work in time or daily problems in dealing with difficult clients.

Stressors can group into different categories physical stressors, psychosocial stress, Social stressors, and Work-related stressors.

2.2.1. Review Current Research on Stress Variables and Their Indicators

Seafaring characterized by specific mental, psychosocial, and physical stressors, which cannot be, compared with jobs ashore (Baur, & Schlaich, 2015a).

There is a large number of stressors, risks and challenges that seafarers face, such as long periods away from home, isolation, long working hours, lack of shore leave, fatigue, high levels of work related stress, accidents and maritime disasters, exposure to hazardous substances, communicable diseases, impaired treatment options for cardiovascular diseases, and dangers from piracy (Allen, Wadsworth, & Smith, 2016)

2.2.2. Physical Stressors

Refer to aversive physical working conditions that comprised different attributes like presence of dirty, vibration, chemical, heat, occurrence of noise, ship movement,/ seasickness, presence of hard physical work / lifting and carrying, lack of exercise, and climatic changes during the voyage. (Oldenburg et al\., 2014).

Besides short ship-turnaround times, the reasons for low levels of shore leave are: working, a need for rest, difficulties in simply getting to the dockyard gate from the berthing area, lack of visa or security regulation in the country, and depression (Iversen, 2014).

2.2.3. Social Stressors

encompass separation from family, long stay on board, conflicts between crewmembers, isolation and one of the most frequently cited stressors (i.e., sources of stress) in seafaring is long-term separation from home and family (Iversen, 2012). All seafarers are by the nature of their work separated from their families. Even under the most favorable employment conditions, seafarers spend at least six month of year at sea (Alderton et al., 2011).

Beside loneliness caused by separation from family, partner or wife and children, seafarers also report social isolation, caused by their characteristic way of life on board, now also additionally aggravated by reduction in crew numbers, short ship-turnaround times, and lack of shore leave (MacLachlan et al., 2012). Social isolation in seafarers is a major cause of psychological problems, such as depression, and in particular situations, and in vulnerable individuals, this can lead to suicide (Grappasonni, 2012)

Social isolation in seafarers is a major cause of psychological problems, such as depression, in particular situations, and in vulnerable individuals, this can lead to suicide (Carotenuto et al., 2012; Iversen, 2012).

2.2.4. Psychosocial Stress

On board expressed in the presence of shift work, long working days, irregular working hours, lack of sleep etc. During the stay on board, seafarers have limited influence on quality and quantity of food and their nutrition issue even more pronounced in multi-ethnic crews with different dietary habits and disturbed sexual life on board is associated with the occurrence of psycho-emotional stress in seafarers (Carrera, 2014).

2.2.5. High work demand factors

High work demand stressors of seafarers include typical sources of work stress that recognized in many work stress models. such as the demands of the job (high workload and long working hours); the level of control seafarers have over their work; the support received from management and colleagues; relationships at work; the seafarers 'role in the organization; change and change management; and job security (especially for non-rated seafarers who are employed on contract; Iversen, 2012).

Regarding working hours, the results of an international study, which included 6461 seafarers from 11 countries, showed that most seafarers worked every day of the week, for 67–70 h a week on average, during periods of 2.5–8.5 months at sea (Jensen et al., 2011). In the context of working stressors on board, one of the major issues is fatigue. Fatigue in seafarers regarded

because of work stress, high job demands, insufficient crewmembers, long working hours, and disturbed circadian rhythms imposed by working patterns and shift schedules, sleep deprivation, moreover, compromised safety standards (Allen et al., 2018).

2.2.6. Physical Stressors and Seafarers Employee Performance

On board , when the physical stressors like presence of dirty, vibration, chemical, heat, occurrence of noise, ship movement,/ seasickness, presence of hard physical work / lifting and carrying, lack of exercise, and climatic changes during the voyage. (Oldenburg et al\., 2017). increases it influence the crew members not focus on the main tasks and emphasizes in completing the task as fast as possible, even at the same time quality of work is being sacrificed (Kelly & Loving, 2004). It is obviously not ideal to take more time on all tasks because employees' concern is not only on one task but also about their output – getting the most executed within the limited time given (Kelly & Loving, 2011). Physical stressors need not perceived or imply as negative. But in most cases, when employees' performance is impacted by their factors due to the stress management practice they are prone in making more mistakes (Johnson et al., 2011 cited in Moore et al, 2012).

2.2.7. Psychosocial stress and Seafarers Employee Performance

Psychosocial stressthoseundergo challenges in meeting their performance targets. Previous works done by (Fried, Ben-David, Tiegs, Avital, & Yeverechyahu, 1998) discovered that those employees' with high level of shift work, long working days, irregular working hours, lack of sleep etc.were linked with poor performance effectiveness. Psychosocial stressis damaging to employee performance and has strongly indicated by (Bauer and Green, 1994; Szilagyi, 2011 Williams, Podsakoff & Huber, 2011; Sluss, van Dick, and Thompson, 2011). During the stay on board, seafarers have limited influence on quality and quantity of food and their nutrition issue even more pronounced in multi-ethnic crews with different dietary habits and disturbed sexual life on board is associated with the occurrence of psycho-emotional stress in seafarers (Carrera, 2011).

2.2.8. Social stressors and Seafarers Employee Performance

Social stressors and the performance of seafarers related in its different factors of stressors. Those seafarers who are exposed separation from family, long stay on board, conflicts between crewmembers, isolation, and the like could not focus on his job actively, there will be poor quality of the work, and, dissatisfaction will happen and this in turn has impact on the overall performance of the seafarers. (Iversen, 2012). Beside loneliness caused by separation from

family, partner or wife and children, seafarers also report social isolation, caused by their characteristic way of life on board, now also additionally aggravated by reduction in crew numbers, short ship-turnaround times, and lack of shore leave (MacLachlan et al., 2012). Social isolation in seafarers is a major cause of psychological problems, such as depression, and in particular situations, and in vulnerable individuals, this can lead to poor performance of the seafarers (Grappasonni, 2012)

2.2.9. High work demand and Seafarers Employee Performance

Performance of an employee at his/her workplace is a point of concern for all the organizations irrespective of all the factors and conditions. A good performance of the employees of an organization leads towards a good organizational performance thus ultimately making an organization more successful and effective and the vice versa. (Armstrong & Baron, 2011)

The problems arise for the organizations when they start perceiving that their organizations are already performing at their level best and with great efficiency furthermore, there is no need for further improvement in their organizations (Summers & Hyman, 2011). Ultimate success or failure of an organization determined majorly by the performance of their employees. (Bartlett & Ghoshal, 2011).

2.3. Conceptual framework

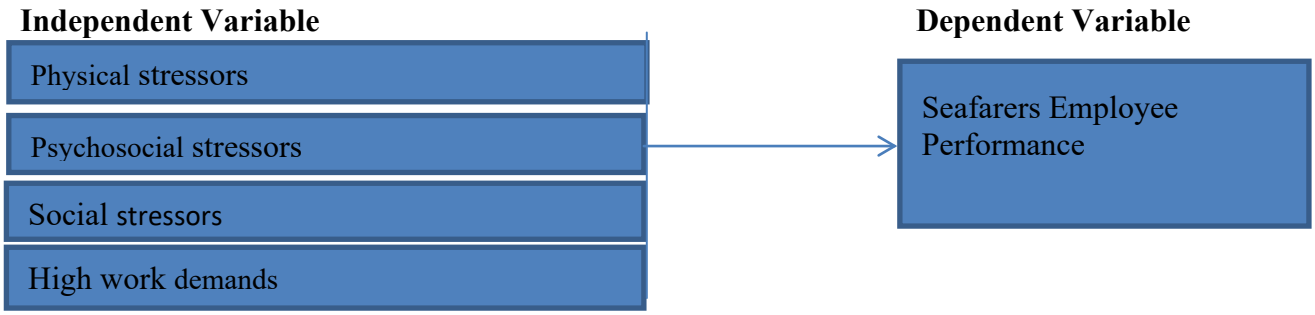

Figure 1- Conceptual Framework, Adopted from the research works of (Ng, 2011**), and Vaggelas and Pallis, 2015)**

This study conceptualizes the stressors factors influencing the performance of seafarers affected by physical stressors, social stressors, psychosocial stress, and high work demand. The purpose of this study is therefore to assess the influence of these factors.

CHAPTER THREE

3. RESEARCH METHODOLOGY

This chapter describes the research design and research methodology that employed in this study. It has been set out under the sub-headings containing research study site, research design, target population, data collection instruments and procedure, and finally, the data analysis and presentation methods would be used in the study.

3.1.Research Approach

The study conducted using a mixed approach to get advantages of both qualitative and quantitative approaches, which can contribute to the wholeness of the investigation at hand. The quantitative approaches involves the generation of data in quantitative form which can be subjected to rigorous quantitative analysis in a formal and rigid fashion while the qualitative approach to research is concerned with subjective assessment of attitudes, opinions and behavior. Research in such a situation is function of researcher's insight and impression (Kothari, 2004) According (Kothari, 2004) mixed research method is defined as the class of research welfare the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language in to a single study. This study used mixed method design in sequential descriptive way. Because, mixed research is useful to capture the best of both qualitative and quantitative approaches and in these the researcher also intended to assess seafarers stress management practice.

According to Kothari (2004), research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. The general objective of this research is to assessing factors influencing freighttransport mode and carrier selection in case of Packrat PLC.

3.2.Research Design

A research design is a plan, structure, and strategy conceived in order to obtain answers to research questions and control variables. It helps to control the error variables of a particular research problem investigated.

This study employeddescriptive and explanatory design to assess effect of stress on seafarer's performance. Descriptive research design used when data collected to describe persons, organizations, settings or phenomena (Creswell, 2003). A descriptive research design presents and reports the way things are (Mugenda and Mugenda, 2003). In addition, descriptive research design used when data collected to describe persons, organizations, settings or phenomena

(Creswell, 2003). Kothari (2008) mentions that descriptive design has enough provision for protection against bias and ensure reliability.

The study adopted a quantitative survey as a major method. Quantitative surveys designed to fit a questionnaire schedule. This is most commonly used technique in research (Veal, 2006)

3.3.Population of the Study

Population as defined by Mugenda (2003) is an entire group of individual or objects having common observable characteristic. The study targeted population all seafarers from the three departments of ESLSE who are currently working on duty and on leave. The target populations of the study used stratified sampling/proportional random sampling or quota random sampling and 191 from engine department, 155 from deck department, and 106 from catering department. The number of these people when put together is approximately 452

Table 3.3.1 Summary of Target Population

Section/Unit	Target Population	Percentage
Engine Department	191	42.25
Deck Department,	155	34.29
Catering Department	106	23.46
Total	452	100

Table 1 Summary of target population shows that out of the total 452 targeted population, 191 (42.25%) are found under engine department, 155 (34.29%) under deck department, and 106 (23.46%) under catering department.

The sampling frame described the list of all population units from which the sample selected (Cooper & Schindler, 2003). It is a physical representation of the target population and comprises all the units that are potential members of a sample (Kothari, 2008).

For calculating the sample size, the study used Yamane (1967) formula. 95% confidence level with 5% error Sample as shown in Table 3.4.2

Sample size_____

$$n = \frac{N}{1+Ne^2}$$

Where, n= the sample size

N= the size of population

e= **error of 5% point**

Sample size

$$n = \frac{452}{1+452\,(0.05 \times 0.05)} = 2.13$$

$$n = 452/2.13 = 212$$

Table 3.4.2: Sampling Frame

Section/Unit	Target Population Frequency	Sample size
Engine Department	191	89.58
Deck Department,	155	72.7
Catering Department	106	49.72
Total	452	212

Keller (2009) indicates that a sample is a set drawn from the entire population. A stratified sampling technique employed to stratify three (3) units at the seafarers under engine department, seafarers under deck department, and seafarers under catering department with 191; engine department, with 155-deck department and 106 catering department expresses, a sample size.

3.4.Data Collection Methods

The data collection process has done through a systematic sequence of events. The process begun by seeking permission from the respondent in order to avoid any possible stop that might have arisen from lack of response to conduct the research. This followed by sample selection based on the strata as explained in the sampling technique above. However, the researcher made a self-introduction and requested for consent of the respondents in taking part in the exercise. Subsequently, questionnaires administered to the respondents. On the other hand, the secondary data were collected from existing literature relating to the study topic and data was collected from records available at Ethiopian shipping and logistics service enterprise record review from journals, booklets, policy documents, reports of weekly, monthly and annually performance on ship operation. The main instrument employed for data collection in this research was questionnaire. A 1 – 3, 1 – 4 and 5-point Likert scale questionnaire was administered to the respondents.

3.5.Data Processing and Analysis

Data analysis defined as a way of analyzing information gathered on focusing on various questions posed in the study (Kothari, 2004). Data for this study was quantitative in nature. Quantitative analysis will do for the numerical data obtained from the field. This will do using descriptive statistics with the help of Statistical Package for Social Sciences (SPSS) and Microsoft Excel 2013. The responses in the questionnaire will cod into common themes to

facilitate analysis. Data will present in descriptive form supported by tables, frequency distributions, and percentages. The researcher used likert scale as parameter to measure the variables.

3.6.Reliability and Validity of Data

Reliability refers to the extent to which data collection technique or analysis procedures will yield consistent findings (Mark et al., 2007). “It is important that all surveys are tested before the actual survey is conducted. This is done to ensure that the questionnaire is cleared to respondents and can be completed in the way the researcher wishes” (John Adams et al., 2007).

Pilot testing is an activity that helps the study in determining whether there are errors, limitations, or other weaknesses within the design and allows the researcher to make necessary adjustments and corrections before embarking on the survey. For the consumption of this research, a pilot study wastaken on nearly 10 deck department, engineer department and catering department since they are directly involved with the shipping operation to test the reliability and validity of the questionnaire.

3.6.1. Reliability

Reliability of the questionnaires will test by using the statistical tool Cronbach’s coefficient alpha score of 0.70 that is the cutoff acceptable limit. As Pallant (2011) indicated, it provides an indication of the average correlation among all of the items that make up the scale. Values range from 0 to 1, with higher values indicating greater reliability. Items with a Cronbach’s Alpha value of 0.7 and above will be acceptable as recommended by Nunnally (1978).This study used Cronbach’s coefficient alpha in order to measure the reliability of the scales used by using SPSS (Statistical Package for the Social Sciences) version 21.0.

Table 3.6.1

Summary of Measures

No.	Study Variables	Source of Items (scale or Instrument source)	No. of Items in the Scale	Chronbach’s Alpha Results
1	Physical Stressors	Based on Standardized Items	9	.7.3
2	Psychosocial Stressors	Based on Standardized Items	9	.70
3	Social Stressors	Based on Standardized Items	9	.7.2
4	High work demand	Based on Standardized Items	9	.7.1

As depicted in the above **Table 3.6.1** the overall Cronbach's alpha scored by the four variables that incorporated by the five points Likert scale,result shows above is 0.7, which is above the cutoff acceptable limit of 0.70.

3.6.2. Validity

Validity refers to the extent to which an empirical measure adequately reflects real meaning of the concept under consideration. For guaranteeing the validity of this study, all the concepts and theories which are used here are referred to relative literature and certain authorities documents in that correlative area. Validity is concerned with whether the findings are really about what they appear to be about (Mark et al., 2007).

3.7. Ethical Consideration

Respondents approached and informed about the intent of the research. Furthermore, the respondents informed that their response would be keeping confidential and will used for academic purpose only, in verbal communication and in writing. After getting the consent of the respondents, they provided with a self-administered questionnaire designed for the purpose of this study, so that they complete and return it back. The researcher did not force seafarers to participate without their willing.

CHAPTER FOUR

4. DATA PRESENTAION ANALYSIS AND DISCUSSIONS

The study represents the empirical findings and results of the research. The data presented here includes response rate, background information of the respondents and the presentation of research findings against each individual. Descriptive statistics also employed in analyzing the findings.

4.1. RESPONSE RATE AND DEMOGRAPHIC CHARACTERSTICS OF RESPONDENT

4.1.1. RESPONSE RATE

From the data gathered, out of 36 questionnaires distributed, 212 (100%) were filled and returned. According to Mugenda (2003) 70% response rate is considered very well, 60% good and 50% response rate is adequate.

Therefore, the response rate in this case 100% was very good representation of the entire targeted population.

4.1.2. DEMOGRAPHIC CHARACTERSTICS OF RESPONDENT

The study required to establish the background information of the respondents by using the following parameters: gender, age, level of education, type of organization, position held by the respondents and number of year's respondents has been working with the department.

Table 4.1.2:Demographic Characteristics of Sample Respondents

No	Items	Response	
		Frequency	**Percent**
1	Gender		
	a) Male	212	100
	b) Female	0	0
	Total	**212**	**100**
2	Age		
	a) Less than 24 years	90	42.5
	b) 25 – 29 years	43	20.3
	c) 30 – 45 year	41	19.3
	d) 46 – 50+ years	38	17.9
	Total	**212**	**100**

3	Educational level a) Diploma b) First Degree c) Post Graduate Degree	 112 57 43	 52.8 26.9 20.3
	Total	**212**	**100**
4	Type of Department a) Engine Department b) Deck Department c) Catering Department	 90 72 50	 42.5 34.0 23.6
	Total	**212**	**100**
5	Position a) Engineer b) Officer c) Steward d) Able seaman e) Electrician f) Chief Cook g) Mess man h) Ordinary seaman	 52 32 10 25 38 15 25 15	 24.5 15.1 4.7 11.8 17.9 7.1 11.8 7.1
	Total	**212**	**100**
6	Service Year a) Over 10 years b) 6 – 9 years c) 3 – 5 years d) Less than 2 years	 38 81 52 41	 17.9 38.2 24.5 19.3
	Total	**212**	**100**

Source SPSS 21

The descriptive statistics of the study shown in **Table 4.1.2**depictsthe demographic characteristics of sample respondents.Hence 212 (100%) of the respondents were male.Here the data shows the male respondents only because of the hard nature of the job the enterprise does not allow female to engage in seagoing work.

The descriptive statistics shows, out of the total respondent 90(42.5%) less than 24 years, 43 (20.3%) between 25 –29 years, 41 (19.3%) between 30 – 45 years, and 38 (17.9%) aged between 46 –50+ years.Besides, 112 (52.8%) is diploma holders, 57 (26.9%) first-degree holders and 43 (20.3%) postgraduate holders. The statistics also shows out of the total respondent 90 (42.5%) from engine department, 72 (34%) from deck department and 50 (23.6%) from catering department of the ship.In addition,52 (24.5 %) is engineer,32 (15.1%) officer,10(4.7%) steward, 25 (11.8%) able seaman and 38 (17.9%) electrician, 15 (7.1%) chief cook, 25 (11.8%) mess man, and 15 (7.1%) ordinary seaman.The descriptive statistics of the study alsoshows, out of the total

respondent 38 (17.9%) have over 10 years, experience, 81 (38.2%) have 6 – 9 years of experience, 52 (24.5%) have 3 – 5 years of experience and 41 (19.3%) of the respondents have less than 2 years of experience.

4.2. PHYSICAL STRESSORS

Table 4.2.1: Percentage and Descriptive Statistics of the Physical Stressors

Phsical Stressors		Frequency	Percent	Mean	Std. Deviation
Heat on the ship is major stressor	Strongly Disagree	0	0	0	0
	Disagree	28	13.2	3.618	0.709
	No opinion or uncertain	25	11.8		
	Agree	159	75		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated from heat	Strongly Disagree	0	0	0	0
	Disagree	147	69.3	2.557	0.8662
	No opinion or uncertain	12	5.7		
	Agree	53	25		
	Strongly Agree	0	0	0	0
Noise is major stressor	Strongly Disagree	0	0	0	0
	Disagree	28	13.2	3.618	0.709
	No opinion or uncertain	25	11.8		
	Agree	159	75		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated from noise	Strongly Disagree	0	0	0	0
	Disagree	147	69.3	2.557	0.8662
	No opinion or uncertain	12	5.7		
	Agree	53	25		
	Strongly Agree	0	0	0	0
Ship movement on the ship is major stressor	Strongly Disagree	0	0	0	0
	Disagree	30	14.2	3.604	0.7244
	No opinion or uncertain	24	11.3		
	Agree	158	74.5		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated from ship movement	Strongly Disagree	0	0	0	0
	Disagree	143	67.5	2.599	0.8894
	No opinion or uncertain	11	5.2		
	Agree	58	27.4		
	Strongly Agree	0	0	0	0
Heat on the vessel exposed	Sick Leave	16	7.5	3.947	1.964
	Medical Unfit	37	17.5		
	Disobedient	34	16		
	Poor motivation	42	19.8		
	Sign off from the Ship	5	2.4		
	Unable to do job properly	18	8.5		
	Dislike the job	35	16.5		
Noise on the vessel exposed to	Sick Leave	16	7.5	3.947	1.964
	Medical Unfit	37	17.5		
	Disobedient	34	16		
	Poor motivation	42	19.8		

	Sign off from the Ship	**5**	**2.4**		
	Unable to do job properly	**18**	**8.5**		
	Dislike the job	**35**	**16.5**		
Ship movement exposed	**Sick Leave**	**15**	**7.1**	**3.952**	**1.9432**
	Medical Unfit	**37**	**17.5**		
	Disobedient	**34**	**16**		
	Poor motivation	**42**	**19.8**		
	Sign off from the Ship	**5**	**2.4**		
	Unable to do job properly	**18**	**8.5**		
	Dislike the job	**34**	**16**		

The study sought to find out the extent of agreement or disagreement about the presence of heat on the ships expose to stress. The finding of the study shown in Table 4.2.1 indicates28 (13.2%), 25 (11.8%) and 159 (75%) of the respondents were disagree, no opinion or uncertain and agree respectively presence of heat in ships exposed to stress with mean value 3.618 and standard deviation of .7090.

The finding of the study shown in table 4.2.1 indicates out of the respondents:

16 (7.5%), 37 (17.5%) 34 (16%), 42 (19.8%), 5 (2.4%), 18 (8.5%) and 35 (16.5%) exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job because of heat on the vessel, with mean value 3.9465 and standard deviation of 1.9640.

The finding of the study shown in table 4.2.1 indicates out of the total respondents: 147 (69.3%), 12 (5.7%) an 53 (25%), disagree, no opinion or uncertain and agree respectively on the safety and health policy address the issues of stress generated from heat in ships with mean value 2.5566 and standard deviation of .8662.

Finding on table **4.2.1** indicates out of the total respondents, 28 (13.2%), 25 (11.8%) an 159 (75%), disagree, no opinion or uncertain and agree respectively on the presence of noise in ships and its exposition to stress with mean value 3.618 and standard deviation of .7090.

The finding of the study shown in table **4.2.1** indicates out of the total respondents,

16 (7.5%), 37 (17.5%) 34 (16%), 42 (19.8%), 5 (2.4%), 18 (8.5%) and 35 (16.5%) exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job as a result noise on the vessel with mean value 3.9465 and standard deviation of 1.9640.

The finding of the study shown in table **4.2.1** indicates out of the total respondents, 147 (69.3%), 12 (5.7%) an 53 (25%), disagree, no opinion or uncertain and agree respectively on the safety

and health policy address the issues of stress generated from noise in ships with mean value 2.5566 and standard deviation of .8662.

The finding of the study shown in table **4.2.1**indicates out of the total respondents,30 (14.2%), 24 (11.3%) an 158 (74.5%), disagree, no opinion or uncertain and agree respectively on the presence of ship movement in ships and its exposition to stress with mean value 3.6038 and standard deviation of .7244.

Finding on table 4.2.1indicates out of the total respondents,

15 (7.1%), 37 (17.5%) 33 (15%), 44 (20.8%), 5 (2.4%), 18 (8.5%) and 34 (16%) exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job because of ship movement on the vessel, with mean value 3.9516 and standard deviation of 1.9432.

The finding of the study shown in table **4.2.1** indicates out of the total respondents,143 (67.5%), 11 (5.2%) an 58 (27%), of the respondents were disagree, no opinion or uncertain and agree respectively on the safety and health policy address the issues of stress generated from ship movement in ships with mean value 2.5991 and standard deviation of .8894.

4.3. PSYCHSOCIAL STRESSORS

Table 4.3.1: Percentage and Descriptive Statistics of the Psychosocial Stressors

PSYCHSOCIAL STRESSORS		Frequency	Percent	Mean	Std. Deviation
Long working is major stressor	Strongly Disagree	0	0	0	0
	Disagree	28	13.2	3.618	0.709
	No opinion or uncertain	25	11.8		
	Agree	159	75		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated from long working	Strongly Disagree	0	0	0	0
	Disagree	147	69.3	2.557	0.8662
	No opinion or uncertain	12	5.7		
	Agree	53	25		
	Strongly Agree	0	0	0	0
Lack of sleep is major stressor	Strongly Disagree	0	0	0	0
	Disagree	30	14.2	3.604	0.7244
	No opinion or uncertain	24	11.3		
	Agree	158	74.5		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated from lack of sleep	Strongly Disagree	0	0	0	0
	Disagree	143	67.5	2.599	0.8894
	No opinion or uncertain	11	5.2		
	Agree	58	27.4		
	Strongly Agree	0	0	0	0

Loneliness on the ship is major stressor	Strongly Disagree	0	0	0	0
	Disagree	28	13.2	3.618	0.709
	No opinion or uncertain	25	11.8		
	Agree	159	75		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated from loneliness	Strongly Disagree	0	0	0	0
	Disagree	147	69.3	2.557	0.8662
	No opinion or uncertain	12	5.7		
	Agree	53	25		
	Strongly Agree	0	0	0	0
Long working exposed	Sick Leave	16	7.5	3.947	1.964
	Medical Unfit	37	17.5		
	Disobedient	34	16		
	Poor motivation	42	19.8		
	Sign off from the Ship	5	2.4		
	Unable to do job properly	18	8.5		
	Dislike the job	35	16.5		
Lack of sleep exposed to	Sick Leave	15	7.1	3.952	1.9432
	Medical Unfit	37	17.5		
	Disobedient	34	16		
	Poor motivation	42	19.8		
	Sign off from the Ship	5	2.4		
	Unable to do job properly	18	8.5		
	Dislike the job	34	16		
Loneliness exposed to	Sick Leave	16	7.5	3.947	1.964
	Medical Unfit	37	17.5		
	Disobedient	34	16		
	Poor motivation	42	19.8		
	Sign off from the Ship	5	2.4		
	Unable to do job properly	18	8.5		
	Dislike the job	35	16.5		

The finding of the study shown in table**4.3.1** indicates out of the total respondents, 28 (13.2%), 25 (11.8%) an 159 (75%), disagree, no opinion or uncertain and agree respectively on the presence of long working on the vessel and its exposition to stress with mean value 3.6179 and standard deviation of .7090.

Out of the total respondents, 16 (7.5%), 37 (17.5%) 34 (16%), 42 (19.8%), 5 (2.4%), 18 (8.5%) and 35 (16.5%) exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job as a result long working on the vessel with mean value 3.9465 and standard deviation of 1.9640.

The finding of the study shown in table **4.3.1**indicates out of the total respondents,
147 (69.3%), 12 (5.7%) and 53 (25%), disagree, no opinion or uncertain and agree respectively on the safety and health policy address the issues of stress generated from long working on the vessel,with mean value 2.5566 and standard deviation of .8662.

The study sought to find out the extent of agreement or disagreement about the presence of lack of sleep on the vessel exposed to stress. The finding of the study shown in table **4.3.1**indicates:
30 (14.2%), 24 (11.3%) and 158 (74.5%), disagree, no opinion or uncertain and agree respectively on the presence of lack of sleep on the vessel and its exposition to stress with mean value 3.618 and standard deviation of .7244.

The finding of the study shown in table**4.3.1** indicates out of the total respondents,
15 (7.1%), 37 (17.5%) 34 (16%), 42 (19.8%), 5 (2.4%), 18 (8.5%) and 34 (16.0%) exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job as a result lack of sleep on the vessel with mean value 3.9516and standard deviation of 1.9432.

The finding of the study shown in Table **4.3.1** indicates:
143 (67.5%), 11 (5.2%) an 58 (27.4%), disagree, no opinion or uncertain and agree respectively on the safety and health policy address the issues of stress generated from lack of sleep in ships with mean value 2.5991 and standard deviation of .8894.

The study sought to find out the extent of agreement or disagreement about the presence of loneliness in ships exposed to stress. The finding of the study shown in Table **4.3.1** indicates:
28 (13.2%), 25 (11.8%) an 159 (75%), of the respondents were disagree, no opinion or uncertain and agree respectively on the presence of loneliness in ships and its exposition to stress with mean value 3.6179 and standard deviation of .7090.

The finding of the study shown in Table **4.3.1** indicates:
16 (7.5%), 37 (17.5%) 34 (16%), 42 (19.8%), 5 (2.4%), 18 (8.5%) and 35 (16.5%) of the respondents were exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job as a result loneliness on the vessel with mean value 3.9465 and standard deviation of 1.9640.

The finding of the study shown in Table **4.3.1** indicates:
147 (69.3%), 12 (5.7%) an 53 (25%), of the respondents were disagree, no opinion or uncertain and agree respectively on the safety and health policy address the issues of stress generated from loneliness in ships with mean value 2.5566 and standard deviation of .8662.

4.4. SOCIAL STRESSORS

Table 4.4.1: Percentage and Descriptive Statistics of the Social Stressors

SOCIAL STRESSORS		Frequency	Percent	Mean	Std. Deviation
Separation from family is major stressor.	Strongly Disagree	0	0	0	0
	Disagree	30	14.2	3.604	0.7244
	No opinion or uncertain	24	11.3		
	Agree	158	74.5		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated separation from family	Strongly Disagree	0	0	0	0
	Disagree	143	67.5	2.599	0.8894
	No opinion or uncertain	11	5.2		
	Agree	58	27.4		
	Strongly Agree	0	0	0	0
Long stay on board is major stressor	Strongly Disagree	0	0	0	0
	Disagree	28	13.2	3.618	0.709
	No opinion or uncertain	25	11.8		
	Agree	159	75		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated from long stay on board	Strongly Disagree	0	0	0	0
	Disagree	147	69.3	2.557	0.8662
	No opinion or uncertain	12	5.7		
	Agree	53	25		
	Strongly Agree	0	0	0	0
Conflicts between crewmembers and isolations is major stressor	Strongly Disagree	0	0	0	0
	Disagree	28	13.2	3.618	0.709
	No opinion or uncertain	25	11.8		
	Agree	159	75		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated from conflicts between	Strongly Disagree	0	0	0	0
	Disagree	147	69.3	2.557	0.8662
	No opinion or uncertain	12	5.7		
	Agree	53	25		
	Strongly Agree	0	0	0	0
separation from family exposed	Sick Leave	15	7.1	3.952	1.9432
	Medical Unfit	37	17.5		
	Disobedient	34	16		
	Poor motivation	42	19.8		
	Sign off from the Ship	5	2.4		
	Unable to do job properly	18	8.5		
	Dislike the job	34	16		
long stay on board exposed	Sick Leave	16	7.5	3.947	1.964
	Medical Unfit	37	17.5		
	Disobedient	34	16		
	Poor motivation	42	19.8		

	Sign off from the Ship	**5**	**2.4**		
	Unable to do job properly	**18**	**8.5**		
	Dislike the job	**35**	**16.5**		
Conflicts between crewmembers and isolation exposed	**Sick Leave**	**16**	**7.5**	**3.947**	**1.964**
	Medical Unfit	**37**	**17.5**		
	Disobedient	**34**	**16**		
	Poor motivation	**42**	**19.8**		
	Sign off from the Ship	**5**	**2.4**		
	Unable to do job properly	**18**	**8.5**		
	Dislike the job	**35**	**16.5**		

The study sought to find out the extent of agreement or disagreement about the presence of separation from family exposed to stress. The finding of the study shown in Table **4.4.1** indicates:

30 (14.2%), 24 (11.3%) an 158 (74.5%), of the respondents were disagree, no opinion or uncertain and agree respectively on the presence of separation from family and its exposition to stress with mean value 3.6038 and standard deviation of .7244.

The finding of the study shown in Table **4.4.1**indicates:

15 (7.1%), 37 (17.5%) 33 (15%), 44 (20.8%), 5 (2.4%), 18 (8.5%) and 34 (16%) of the respondents were exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job as a result separation from family with mean value 3.9516 and standard deviation of 1.9432.

The finding of the study shown in Table **4.4.1** indicates:

143 (67.5%), 11 (5.2%) an 58 (27%), of the respondents were disagree, no opinion or uncertain and agree respectively on the safety and health policy address the issues of stress generated from separation from family with mean value 2.5991 and standard deviation of .8894.

The study sought to find out the extent of agreement or disagreement about the presence of long stay on board exposed to stress. The finding of the study shown in Table **4.4.1** indicates:

28 (13.2%), 25 (11.8%) an 159 (75%), of the respondents were disagree, no opinion or uncertain and agree respectively on the presence of long stay on board and its exposition to stress with mean value 3.6179 and standard deviation of .7090.

The finding of the study shown in Table **4.4.1** indicates:

16 (7.5%), 37 (17.5%) 34 (16%), 42 (19.8%), 5 (2.4%), 18 (8.5%) and 35 (16.5%) of the respondents were exposed to sick leave, medical unfit, disobedient, poor motivation, sign off

from the ship, unable to do job properly and dislike the job as a result long stay on board with mean value 3.9465 and standard deviation of 1.9640.

The finding of the study shown in table **4.4.1** indicates:

147 (69.3%), 12 (5.7%) an 53 (25%), of the respondents were disagree, no opinion or uncertain and agree respectively on the safety and health policy address the issues of stress generated from long stay on board in ships with mean value 2.5566 and standard deviation of .8662.

The study sought to find out the extent of agreement or disagreement about the presence of conflicts between crewmembers and isolation on board exposed to stress. The finding of the study shown in table **4.4.1** indicates:

28 (13.2%), 25 (11.8%) an 159 (75%), of the respondents were disagree, no opinion or uncertain and agree respectively on the presence of conflicts between crewmembers and isolation on board and its exposition to stress with mean value 3.6179 and standard deviation of .7090.

The finding of the study shown in table **4.4.1** indicates:

16 (7.5%), 37 (17.5%) 34 (16%), 42 (19.8%), 5 (2.4%), 18 (8.5%) and 35 (16.5%) exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job as a result conflicts between crewmembers and isolation on board with mean value 3.9465 and standard deviation of 1.9640.

The finding of the study shown in Table **4.4.1**indicates:

147 (69.3%), 12 (5.7%) an 53 (25%), of the respondents were disagree, no opinion or uncertain and agree respectively on the safety and health policy address the issues of stress generated from conflicts between crewmembers and isolation on board in ships with mean value 2.5566 and standard deviation of .8662.

4.5. HIGH WORK DEMAND

Table 4.5.1: Percentage and Descriptive Statistics of the High Work Demand

HIGH WORK DEMAND		Frequency	Percent	Mean	Std. Deviation
Presence of time pressure is major stressor	Strongly Disagree	0	0	0	0
	Disagree	28	13.2	3.618	0.709
	No opinion or uncertain	25	11.8		
	Agree	159	75		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated time pressure / hectic	Strongly Disagree	0	0	0	0
	Disagree	147	69.3	2.557	0.8662
	No opinion or uncertain	12	5.7		
	Agree	53	25		
	Strongly Agree	0	0	0	0

High volume of work from family is major stressor.	Strongly Disagree	0	0	0	0
	Disagree	30	14.2	3.604	0.7244
	No opinion or uncertain	24	11.3		
	Agree	158	74.5		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated from high volume of work	Strongly Disagree	0	0	0	0
	Disagree	143	67.5	2.599	0.8894
	No opinion or uncertain	11	5.2		
	Agree	58	27.4		
	Strongly Agree	0	0	0	0
Lack of independence on the ship is major	Strongly Disagree	0	0	0	0
	Disagree	28	13.2	3.618	0.709
	No opinion or uncertain	25	11.8		
	Agree	159	75		
	Strongly Agree	0	0	0	0
The safety and health policy address the issues of stress generated from lack of independence	Strongly Disagree	0	0	0	0
	Disagree	147	69.3	2.557	0.8662
	No opinion or uncertain	12	5.7		
	Agree	53	25		
	Strongly Agree	0	0	0	0
Time pressure / hectic activities exposed	Sick Leave	16	7.5	3.947	1.964
	Medical Unfit	37	17.5		
	Disobedient	34	16		
	Poor motivation	42	19.8		
	Sign off from the Ship	5	2.4		
	Unable to do job properly	18	8.5		
	Dislike the job	35	16.5		
High volume of work exposed to	Sick Leave	15	7.1	3.952	1.9432
	Medical Unfit	37	17.5		
	Disobedient	34	16		
	Poor motivation	42	19.8		
	Sign off from the Ship	5	2.4		
	Unable to do job properly	18	8.5		
	Dislike the job	34	16		
lack of independence exposed	Sick Leave	16	7.5	3.947	1.964
	Medical Unfit	37	17.5		
	Disobedient	34	16		
	Poor motivation	42	19.8		
	Sign off from the Ship	5	2.4		
	Unable to do job properly	18	8.5		
	Dislike the job	35	16.5		

The study sought to find out the extent of agreement or disagreement about the presence of time pressure / hectic activities in ships exposed to stress. The finding of the study shown in table

4.5.1indicates: 28 (13.2%), 25 (11.8%) an 159 (75%), of the respondents were disagree, no opinion or uncertain and agree respectively on the presence of time pressure / hectic activities in ships and its exposition to stress with mean value 3.618 and standard deviation of .7090.

The finding of the study shown in table **4.5.1**indicates:

16 (7.5%), 37 (17.5%) 34 (16%), 42 (19.8%), 5 (2.4%), 18 (8.5%) and 35 (16.5%) exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job as a result time pressure / hectic activities on the vessel with mean value 3.9465 and standard deviation of 1.9640.

The finding of the study shown in table **4.5.1**indicates:

147 (69.3%), 12 (5.7%) an 53 (25%), of the respondents were disagree, no opinion or uncertain and agree respectively on the safety and health policy address the issues of stress generated from time pressure / hectic activities in ships with mean value 2.5566 and standard deviation of .8662.

The finding of the study shown in table **4.5.1**indicates:

30 (14.2%), 24 (11.3%) an 158 (74.5%), of the respondents were disagree, no opinion or uncertain and agree respectively on the presence of high volume of work and its exposition to stress with mean value 3.6038 and standard deviation of .7244.

The finding of the study shown in table **4.5.1**indicates:

15 (7.1%), 37 (17.5%) 33 (15%), 44 (20.8%), 5 (2.4%), 18 (8.5%) and 34 (16%) exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job as a result high volume of work with mean value 3.9516 and standard deviation of 1.9432.

The finding of the study shown in table **4.5.1**indicates:

143 (67.5%), 11 (5.2%) an 58 (27%), of the respondents were disagree, no opinion or uncertain and agree respectively on the safety and health policy address the issues of stress generated from high volume of work with mean value 2.5991 and standard deviation of .8894.

The study sought to find out the extent of agreement or disagreement about the lack of independence in ships exposed to stress. The finding of the study shown in Table **4.5.1**indicates:

28 (13.2%), 25 (11.8%) an 159 (75%), of the respondents were disagree, no opinion or uncertain and agree respectively on the presence of lack of independence and its exposition to stress with mean value 3.618 and standard deviation of .7090.

4.6. DISCUSSION OF FINDINGS

The good performance of seafarer's employee is important for the smooth logistics function of the country import and export. Currently, seafarer's employees exposed to stress that affect their performance in the maritime industry. To do so it is very important to assess work place stress management practice of ESLSE seafarer's employees and its impact on performance. There are many factors for the stress of seagoing employees however, for the consumption of these study four influential factories identified and analyzed through questioner data collection.

4.6.1. PHYSICAL STRESSORS

4.6.1.1.Confidence interval Estimate for Differentiation on physical stressors

In order to ensure the acceptability of the mean value of the survey data a 95% confidence interval test on mean difference have conducted for the criterion variable and its predictors.

Confidence interval estimate for differentiation on physical stressors

4.6.1.2.Mean Score Values of Physical Stressors

No.	Item	One-Sample Statistics			
		N	Mean	Std. Deviation	Std. Error Mean
1	Heat on the ship is major stressor.	212	3.618	0.709	0.0487
2	Heat on the vessel exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and	187	3.947	1.96401	0.14362
3	The safety and health policy on the vessel address the issues of stress	212	2.557	0.866219	0.059492
4	Noise on the ship is major stressor	212	3.618	0.70895	0.04869
5	Noise on the vessel exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and	187	3.947	1.96401	0.14362
6	The safety and health policy on the vessel address the issues of stress	212	2.557	0.86622	0.05949
7	Ship movement on the ship is major stressor.	212	3.604	0.72438	0.04975
8	Ship movement on the vessel exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job	186	3.952	1.9432	0.14248
9	The safety and health policy on the vessel address the issues of stress generated from ship movement.	212	2.599	0.88943	0.06109

Presence of heat in the ship exposed to stress with mean value of 3.618 and a standard deviation of 0.709. As per (Pihie, 2009), the mean value 3.618 lies within the high-level range. This can interpret, as the presence of heat in the workplace is high-level stressors of seafarers and its presence highly exposed seafarers to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job as the mean value 3.9465 falls under high level and a standard deviation of 1.9640.

Moreover, the safety and health policy on the vessel addressing the issues of stress generated from heat lies with mean value of 2.557 and a standard deviation of 0.866. As mean value, 2.557 lies within the moderate-level range the safety and health policy on the vessel addressing the stress generated from heat is moderate.

Here the presence of heat in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

Presence of noise in the ship exposed to stress with mean value of 3.618 and a standard deviation of 0.709. As per (Pihie, 2009), the mean value 3.618 lies within the high-level range. This can interpret, as the presence of noise in the workplace is high stressors of seafarers and its presence highly exposed seafarers to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job as the mean value 3.9465 falls under high level and a standard deviation of 1.9640.

Moreover, the safety and health policy on the vessel addressing the issues of stress generated from noise lies with mean value of 2.557 and a standard deviation of 0.866. As mean value, 2.557 lies within the moderate-level range the safety and health policy on the vessel addressing the stress generated from noise is moderate.

Here the presence of noise in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

Presence of ship movement in the ship exposed to stress with mean value of 3.604 and a standard deviation of 0.724. As per (Pihie, 2009), the mean value 3.604 lies within the high-level range. This can interpret, presence of ship movement in the workplace is high stressors of seafarers, and its presence highly exposed seafarers to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job as the mean value 3.952 falls under high level and a standard deviation of 1.943.

Moreover, the safety and health policy on the vessel addressing the issues of stress generated from ship movementlies with mean value of 2.599 and a standard deviation of 0.889. As mean value, 2.599 lies within the moderate-level range the safety and health policy on the vessel addressing the stress generated from ship movement is moderate.

Here the presence of ship movement in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers exposed to sick leave, medical

unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

4.6.1.3.Correlation Analysis for physical stressors & its predictor factors

Correlation procedures vary depending on data type. This study used an interval data. Therefore, Pearson's Product Moment Coefficient (r) is the appropriate statistical procedure to measure the degree of association between two interval variables. Table 4.6.1.3 below displays the bivariate correlation results for the data collected on the criterion variable on physical stressors and its predictor variables. (Cohen, 1998) cited by (Warokka et al. 2012), interpreted the coefficient of correlation between 0 and 1 as in the following manner. The correlation coefficient (r) ranging from 0.10 to 0.29 may regarded as indicating a low degree of correlation, r ranging from 0.30 to 0.49 may considered as a moderate degree of correlation, and r ranging from 0.50 to 1.00 may regarded as a high degree of correlation. Considering the relationship of the physical stressors with each of the predictor factors as shown below:

Pearson's bivariate correlation for physical stressors factors

Correlations

No	Item		Heat on the ship	Heat exposed to	Safety and health policy	Noise on the ship	Noise exposed to	Safety and health policy	Ship movement on the ship	Ship movement on the vessel	Safety and health policy
1	Heat on the ship is major stressor.	Pearson Correlation	1	.269**	.039	.054	-.061	.012	.001	-.033	-.006
		Sig. (2-tailed)		.000	.569	.437	.406	.862	.986	.653	.933
2	Heat exposed to sick leave, medical unfit, disobedient, poor motivation,	Pearson Correlation	.269**	1	-.313**	.024	.011	.088	.001	.088	.016
		Sig. (2-tailed)	.000		.000	.745	.889	.228	.985	.257	.824
3	Safety and health policy	Pearson Correlation	.039	-.313**	1	.080	-.011	.079	.052	-.023	.003
		Sig. (2-tailed)	.569	.000		.247	.886	.250	.458	.748	.961
4	Noise on the ship is major stressor	Pearson Correlation	.054	.024	.080	1	.257**	.090	.531**	.198**	.040
		Sig. (2-tailed)	.437	.745	.247		.000	.191	.000	.006	.566
5	Noise exposed to sick leave, medical unfit, disobedient, poor motivation,	Pearson Correlation	-.061	.011	-.011	.257**	1	-.306**	.041	.783**	-.176*
		Sig. (2-tailed)	.406	.889	.886	.000		.000	.575	.000	.016
6	Safety and health policy	Pearson Correlation	.012	.088	.079	.090	-.306**	1	.030	-.222**	.685**
		Sig. (2-tailed)	.862	.228	.250	.191	.000		.671	.002	.000
7	Ship movement on the ship is major stressor.	Pearson Correlation	.001	.001	.052	.531**	.041	.030	1	.209**	.052
		Sig. (2-tailed)	.986	.985	.458	.000	.575	.671		.004	.452
8	Ship movement exposed to sick leave, medical unfit, motivation, etc	Pearson Correlation	-.033	.088	-.023	.198**	.783**	-.222**	.209**	1	-.319**
		Sig. (2-tailed)	.653	.257	.748	.006	.000	.002	.004		.000
9	Safety and health policy	Pearson Correlation	-.006	.016	.003	.040	-.176*	.685**	.052	-.319**	1
		Sig. (2-tailed)	.933	.824	.961	.566	.016	.000	.452	.000	

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

The coefficient of correlation between stressor of heat in the ships and its exposition to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job is r=.269** at level of significance p=0.00. This means there is high

degree of direct or positive relationship between these two factors and there is indirect or negative relationship with safety and health policy on the vessel as coefficient of correlation r= -.313** at level of significance p=0.00 implies high degree of indirect or negative relationship. From this, one can concluded that, the presence of heat directly or positively related to its exposition to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job and negatively or inversely related with safety and health policy on the vessel.

The coefficient of correlation between stressor of noise in the ships and its exposition to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job is r=.209**at level of significance p=0.00. This means there is high degree of direct or positive relationship between these two factors and there is indirect or negative relationship with safety and health policy on the vessel as coefficient of correlation r= -.319** at level of significance p=0.00 implies high degree of indirect or negative relationship. From this, one can concluded that, the presence of noise directly or positively related to its exposition to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job and negatively or inversely related with safety and health policy on the vessel.

The coefficient of correlation between stressor of ship movement in the ships and its exposition to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job is r=.257**at level of significance p=0.00. This means there is high degree of direct or positive relationship between these two factors and there is indirect or negative relationship with safety and health policy on the vessel as coefficient of correlation r= -.306** at level of significance p=0.00 implies high degree of indirect or negative relationship. From this, one can concluded that, the presence of ship movement directly or positively related to its exposition to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job and negatively or inversely related with safety and health policy on the vessel.

Objective One: To assess presence of physical stressors, how it addresses in safety and health policy and its effect on performance.

As it discussed above, confidenceinterval estimate for differentiation on physical stressors indicated that the mean difference for each of the factors lies between the lower and the upper limits of the 95% confidence interval of the difference. This indicates the sample mean of the

survey represents the population of mean at a level of 0.000, significance. Therefore, it is possible to draw conclusion on how physical stressors expose seafarers to stress and how safety and health policy address the issues and its impact on seafarer's employee performance.

To describe the mean score of the participants, mean score measurement used by Pihie (2009) was applied where mean score: ≥4.5 = Very High, 3.51-4.51= High, 2.51-3.5= Moderate, 1.51-2.5= Low; < 1.5= Very Low (Crewel, 2012).

Presence of heat with mean value 3.618, existence of noise with mean value 3.6179, and occurrence of ship movement /seasickness with mean value 3.6038 has high on exposing seafarers to stress as the mean value of these falls under high level of the standard. And the safety and health policy addressing the issues of heat with mean value 2.5566, noise with mean value 2.5566 and ship movement /seasickness withmean value of 2.5991 has moderate effect as the mean score value 2.5566 and 2.5991 falls under moderate. This means the safety and health policy on the ship not well addressing the issues of heat, noise, and ship movement /seasickness. Because of this, seafarers highly exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The cumulative effect of this reduced productivity of the company in general and the individual performance in particular.

4.6.2. SOCIAL STRESSORS

4.6.2.1.Confidence interval Estimate for Differentiation on Social Stressors

In order to ensure the acceptability of the mean value of the survey data a 95% confidence interval test on mean difference have conducted for the criterion variable and its predictors.

Confidence interval estimate for differentiation on social stressors

4.6.2.2.Mean Score Values of Social Stressors

No.	Item	One-Sample Statistics			
		N	Mean	Std. Deviation	Std. Error Mean
1	Separation from family is major stressor.	161	3.8199	.47287	.03727
2	Separation exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike	161	3.9317	1.99413	.15716
3	Safety and health policy	161	2.5528	.87250	.06876
4	Long stay on board from family is major stressor.	161	3.8075	.49391	.03893
5	Long stay exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike	161	3.9876	1.97480	.15564
6	Safety and health policy	161	2.4783	.83731	.06599
7	Conflicts between crewmembers and isolation is major stressor.	161	3.7826	.52076	.04104
8	Conflicts between crewmembers and isolation exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable	161	3.9876	1.96528	.15489
9	Safety and health policy	161	2.5839	.89832	.07080

Existence of separation from family exposed to stress with mean value of 3.8199 and a standard deviation of 0.47287. As per (Pihie, 2009), the mean value 3.8199 lies within the high-level range. This can interpret, as separation from family is high-level stressors of seafarers and its presence highly exposed seafarers to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job as the mean value 3.9317 falls under high level and a standard deviation of 1.9941.

Moreover, the safety and health policy on the vessel addressing the issues of stress generated from separation from family lies with mean value of 2.5528 and a standard deviation of 0.8725. As mean value, 2.5528 lies within the moderate-level range the safety and health policy on the vessel addressing the stress generated from separation from family is moderate.

Here the presence of separation from family in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

Presence of long stay on board in the ship exposed to stress with mean value of 3.8075 and a standard deviation of .49391. As per (Pihie, 2009), the mean value 3.8075 lies within the high-level range. This can interpret, presence of long stay is high stressors of seafarers, and its presence highly exposed seafarers to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job as the mean value 3.9876 falls under high level and a standard deviation of 1.9748.

Moreover, the safety and health policy on the vessel addressing the issues of stress generated from long stay on board lies with mean value of 2.4783 and a standard deviation of 0.8373. As mean value, 2.4783 lies within the moderate-level range the safety and health policy on the vessel addressing the stress generated from long stay on board is moderate.

Here the presence of long stay on board in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

Here the presence of conflict between crewmembers and isolation in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers

exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

4.6.2.3.Correlation Analysis for social stressors & its predictor factors

Correlation procedures vary depending on data type. This study used an interval data. Therefore, Pearson's Product Moment Coefficient (r) is the appropriate statistical procedure to measure the degree of association between two interval variables. Table 4.6.1.3 below displays the bivariate correlation results for the data collected on the criterion variable on social stressors and its predictor variables. (Cohen, 1998) cited by (Warokka et al. 2012), interpreted the coefficient of correlation between 0 and 1 as in the following manner. The correlation coefficient (r) ranging from 0.10 to 0.29 may regarded as indicating a low degree of correlation, r ranging from 0.30 to 0.49 may considered as a moderate degree of correlation, and r ranging from 0.50 to 1.00 may regarded as a high degree of correlation. Considering the relationship of the social stressors with each of the predictor factors as shown below:

Pearson's bivariate correlation for social stressors factors

Correlations

Item		Separation from family	Separation from familyexposed to	Safety and health policy	Long stay on board is major stressor	Long stay on boardexposed to	Safety and health policy	Conflicts between crewmembers and isolation is	Conflicts between crewmembers and isolation exposed to what .	Safety and health policy
Separation from family is major stressor.	Pearson Correlation	1	.270**	0.005	-0.00943208	0.028432	-0.038	-0.086618523	-0.005370815	-0.022
	Sig. (2-tailed)		.000	.940	.891	.698	.582	.209	.942	.752
Separation exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the	Pearson Correlation	.270**	1	-.299**	.071	0.062666	.119	0.006123298	0.07742122	.026
	Sig. (2-tailed)	.000		.000	.334	.421	.104	.933	.321	.721
Safety and health policy	Pearson Correlation	.005	-.299**	1	.084	-.003	.035	.065	-.076	0.032
	Sig. (2-tailed)	.940	.000		.221	.971	.616	.348	.297	.639
Long stay on board from family is major stressor.	Pearson Correlation	-0.0094	.071	.084	1	.285**	.034	.646**	.234**	.010
	Sig. (2-tailed)	.891	.334	.221		.000	.624	.000	.001	.881
Long stay exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the	Pearson Correlation	0.02843	0.06267	-.003	.285**	1	-.274**	0.074706633	.754**	-.219**
	Sig. (2-tailed)	.698	.421	.971	.000		.000	.307	.000	.002
Safety and health policy	Pearson Correlation	-.038	.119	.035	.034	-.274**	1	-.031	-.202**	.715**
	Sig. (2-tailed)	.582	.104	.616	.624	.000		.651	.005	.000
Conflicts between crewmembers and isolation is major stressor.	Pearson Correlation	-0.0866	0.00612	.065	.646**	0.074707	-.031	1	.288**	.046
	Sig. (2-tailed)	.209	.933	.348	.000	.307	.651		.000	.508
Conflicts between crewmembers and isolation exposed to sick leave, medical unfit,	Pearson Correlation	-0.0054	0.07742	-.076	.234**	.754**	-.202**	.288**	1	-.294**
	Sig. (2-tailed)	.942	.321	.297	.001	.000	.005	.000		.000
Safety and health policy	Pearson Correlation	-.022	.026	0.032	.010	-.219**	.715**	.046	-.294**	1
	Sig. (2-tailed)	.752	.721	.639	.881	.002	.000	.508	.000	

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

The coefficient of correlation between stressor of separation from family in the ships and its exposition to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job is r=.270** at level of significance p=0.00. This means there is high degree of direct or positive relationship between these two factors and there is indirect or negative relationship with safety and health policy on the vessel as coefficient of correlation r= -.299** at level of significance p=0.00 implies high degree of indirect or negative relationship. From this, one can concluded that, the presence of separation from family directly or positively related to its exposition to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job and negatively or inversely related with safety and health policy on the vessel.

The coefficient of correlation between stressor of long stay on board in the ships and its exposition to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job is r=.285**at level of significance p=0.00. This means there is high degree of direct or positive relationship between these two factors and there is indirect or negative relationship with safety and health policy on the vessel as coefficient of correlation r= -.274** at level of significance p=0.00 implies high degree of indirect or negative relationship. From this, one can concluded that, the presence of long stay on board directly or positively related to its exposition to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job and negatively or inversely related with safety and health policy on the vessel.

The coefficient of correlation between stressor of conflicts between crewmembers and isolation in the ships and its exposition to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job is r=.288**at level of significance p=0.00. This means there is high degree of direct or positive relationship between these two factors and there is indirect or negative relationship with safety and health policy on the vessel as coefficient of correlation r= -.294** at level of significance p=0.00 implies high degree of indirect or negative relationship. From this, one can concluded that, the presence of conflicts between crewmembers and isolation directly or positively related to its exposition to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job and negatively or inversely related with safety and health policy on the vessel.

Objective Two: To assess presence of social stressors, how it addresses in safety and health policy and its effect on performance.

As it discussed above, confidenceinterval estimate for differentiation on social stressors indicated that the mean difference for each of the factors lies between the lower and the upper limits of the 95% confidence interval of the difference. This indicates the sample mean of the survey represents the population of mean at a level of 0.000, significance. Therefore, it is possible to draw conclusion on how social stressors expose seafarers to stress and how safety and health policy address the issues and its impact on seafarer's employee performance.

Presence of separation from family with mean value 3.81988, existence of long stay on board with mean value 3.80745, and occurrence of conflicts between crewmembers and isolation with mean value 3.78261 has high on exposing seafarers to stress as the mean value of these falls under high level of the standard. And the safety and health policy addressing the issues of separation from family with mean value 2.5528, long stay on board with mean value 2.4783 and conflicts between crewmembers and isolation withmean value of 2.5839 has moderate effect as the mean score value falls under moderate.

4.6.3. PSYCHSOCIAL STRESSORS

4.6.3.1.Confidence interval Estimate for Differentiation on Psychosocial Stressors

In order to ensure the acceptability of the mean value of the survey data a 95% confidence interval test on mean difference have conducted for the criterion variable and its predictors.

Confidence interval estimate for differentiation on psychosocial stressors

4.6.3.2.Mean Score Values of Psychosocial Stressors

No.	Item	One-Sample Statistics			
		N	Mean	Std. Deviation	Std. Error Mean
1	Long working is major stressor.	212	3.6321	.69970	.04806
2	Long working exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike	189	3.9894	1.96780	.14314
3	The safety and health policy address the issues of stress generated from	212	2.5566	.86622	.05949
4	Lack of sleep is major stressor.	212	3.6179	.71561	.04915
5	Lack of sleep on the vessel exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job	188	3.9947	1.96084	.14301
6	The safety and health policy address the issues of stress generated from	212	2.6179	.89774	.06166
7	Loneliness is major stressor.	212	3.6321	.69970	.04806
8	Loneliness exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike	189	3.9894	1.96780	.14314
9	The safety and health policy address the issues of stress generated from	212	2.5425	.86155	.05917

Presence of long working in the ship exposed to stress with mean value of 3.6321 and a standard deviation of .6997. As per (Pihie, 2009), the mean value 3.6321 lies within the high-level range. This can interpret, presence of long working in the workplace is high-level stressors of seafarers, and its presence highly exposed seafarers to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job as the mean value 3.9894 falls under high level and a standard deviation of 1.9678.

Moreover, the safety and health policy on the vessel addressing the issues of stress generated from long working lies with mean value of 2.5566 and a standard deviation of 0.8662. As mean value, 2.5566 lies within the moderate-level range the safety and health policy on the vessel addressing the stress generated from long working is moderate.

Here the presence of long working in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

Presence of lack of sleep in the ship exposed to stress with mean value of 3.6179 and a standard deviation of .71561. As per (Pihie, 2009), the mean value 3.6179 lies within the high-level range. This can interpret, presence of lack of sleep in the workplace is high stressors of seafarers, and its presence highly exposed seafarers to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job as the mean value 3.9947 falls under high level and a standard deviation of 1.96084.

Moreover, the safety and health policy on the vessel addressing the issues of stress generated from lack of sleep lies with mean value of 2.6179 and a standard deviation of 0.8977. As mean value, 2.557 lies within the moderate-level range the safety and health policy on the vessel addressing the stress generated from lack of sleep is moderate. .

Here the presence of lack of sleep in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

Here the presence of loneliness in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers exposed to sick leave, medical

unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

4.6.3.3.Correlation Analysis for Psychosocial Stressors & its predictor factors

Correlation procedures vary depending on data type. This study used an interval data. Therefore, Pearson's Product Moment Coefficient (r) is the appropriate statistical procedure to measure the degree of association between two interval variables. Table 4.6.1.3 below displays the bivariate correlation results for the data collected on the criterion variable on psychosocial stressors and its predictor variables. (Cohen, 1998) cited by (Warokka et al. 2012), interpreted the coefficient of correlation between 0 and 1 as in the following manner. The correlation coefficient (r) ranging from 0.10 to 0.29 may regarded as indicating a low degree of correlation, r ranging from 0.30 to 0.49 may considered as a moderate degree of correlation, and r ranging from 0.50 to 1.00 may regarded as a high degree of correlation. Considering the relationship of the psychosocial stressors with each of the predictor factors as shown below:

Pearson's bivariate correlation for psychosocial stressors factors

Correlations

No.	Item		Loneliness on board	Loneliness exposed to	Safety and health policy	Lack of sleep	Lack of sleep	Safety and health policy	Long stay on board	Long stay on board exposed to	Safety and health policy
1	Loneliness on board is major stressor.	Pearson Correlation	1	.292**	.040	.080	.091	.070	1.000**	.292**	.040
		Sig. (2-tailed)		.000	.609	.305	.241	.369	0.000	.000	.609
2	Loneliness exposed to sick leave, medical unfit, disobedient, poor motivation, etc	Pearson Correlation	.292**	1	-.262**	.020	.063	-.011	.292**	1.000**	-.262**
		Sig. (2-tailed)	.000		.001	.802	.421	.892	.000	0.000	.001
3	Safety and health policy	Pearson Correlation	.040	-.262**	1	.034	.132	.014	.040	-.262**	1.000**
		Sig. (2-tailed)	.609	.001		.663	.090	.861	.609	.001	0.000
4	Lack of sleep is major stressor.	Pearson Correlation	.080	.020	.034	1	.263**	.035	.080	.020	.034
		Sig. (2-tailed)	.305	.802	.663		.001	.657	.305	.802	.663
5	Lack of sleep exposed to sick leave, medical unfit, disobedient, poor	Pearson Correlation	.091	.063	.132	.263**	1	-.315**	.091	.063	.132
		Sig. (2-tailed)	.241	.421	.090	.001		.000	.241	.421	.090
6	Safety and health policy	Pearson Correlation	.070	-.011	.014	.035	-.315**	1	.070	-.011	.014
		Sig. (2-tailed)	.369	.892	.861	.657	.000		.369	.892	.861
7	Long stay on board from family is major stressor.	Pearson Correlation	1.000**	.292**	.040	.080	.091	.070	1	.292**	.040
		Sig. (2-tailed)	0.000	.000	.609	.305	.241	.369		.000	.609
8	Long stay exposed to sick leave, medical unfit, disobedient, poor motivation, etc	Pearson Correlation	.292**	1.000**	-.262**	.020	.063	-.011	.292**	1	-.262**
		Sig. (2-tailed)	.000	0.000	.001	.802	.421	.892	.000		.001
9	Safety and health policy	Pearson Correlation	.040	-.262**	1.000**	.034	.132	.014	.040	-.262**	1
		Sig. (2-tailed)	.609	.001	0.000	.663	.090	.861	.609	.001	

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

The coefficient of correlation between stressor of loneliness in the ships and its exposition to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job is r=.292** at level of significance p=0.00. This means there is high degree of direct or positive relationship between these two factors and there is indirect or negative relationship with safety and health policy on the vessel as coefficient of correlation r= -.262** at level of significance p=0.01 implies high degree of indirect or negative relationship. From this, one can concluded that, the presence of loneliness directly or positively related to its exposition to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job and negatively or inversely related with safety and health policy on the vessel.

The coefficient of correlation between stressor of lack of sleep in the ships and its exposition to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job is r=.263** at level of significance p=0.01. This means there is high degree of direct or positive relationship between these two factors and there is indirect or negative relationship with safety and health policy on the vessel as coefficient of correlation r= -.315** at level of significance p=0.00 implies high degree of indirect or negative relationship. From this, one can concluded that, the presence of lack of sleep directly or positively related to its exposition to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job and negatively or inversely related with safety and health policy on the vessel.

The coefficient of correlation between stressor of long stay in the ships and its exposition to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job is r=.292** at level of significance p=0.00. This means there is high degree of direct or positive relationship between these two factors and there is indirect or negative relationship with safety and health policy on the vessel as coefficient of correlation r= -.262** at level of significance p=0.00 implies high degree of indirect or negative relationship. From this, one can concluded that, the presence of long stay directly or positively related to its exposition to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job and negatively or inversely related with safety and health policy on the vessel.

Objective Three: To assess presence of psychosocial stressors, how it addresses in safety and health policy and its effect on performance.

As it discussed above, confidenceinterval estimate for differentiation on psychosocial stressors indicated that the mean difference for each of the factors lies between the lower and the upper limits of the 95% confidence interval of the difference. This indicates the sample mean of the survey represents the population of mean at a level of 0.000, significance. Therefore, it is possible to draw conclusion on how psychosocial stressors expose seafarers to stress and how safety and health policy address the issues and its impact on seafarer's employee performance.

Presence of loneliness with mean value 3.6321, existence of lack of sleep with mean value 3.6179, and occurrence of long stay with mean value 3.9894 has high on exposing seafarers to stress as the mean value of these falls under high level of the standard.

This means the safety and health policy on the ship not well addressing the issues of loneliness, lack of sleep, and long stay. Because of this, seafarers highly exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The cumulative effect of this reduced productivity of the company in general and the individual performance in particular.

4.6.4. HIGH WORK DEMAND

4.6.4.1.Confidence interval Estimate for Differentiation on high work demand

In order to ensure the acceptability of the mean value of the survey data a 95% confidence interval test on mean difference have conducted for the criterion variable and its predictors.

Confidence interval estimate for differentiation on high work demand

4.6.4.2.Mean Score Values of high work demand

No.	Item	One-Sample Statistics			
		N	Mean	Std. Deviation	Std. Error Mean
1	Time pressure / hectic activities is major stressor.	212	3.6321	.69970	.04806
2	Time pressure / hectic activities exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job	189	3.9894	1.96780	.14314
3	Safety and health policy	212	2.5802	.92269	.06337
4	High volume of work is major stressor.	212	3.6179	.71561	.04915
5	High volume of work exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and	188	3.9947	1.96084	.14301
6	Safety and health policy	212	2.5943	.88995	.06112
7	Lack of independence on the ship is major stressor.	212	3.6321	.69970	.04806
8	Lack of independence exposed to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and	189	3.9894	1.96780	.14314
9	Safety and health policy	212	2.5660	.86555	.05945

Presence of time pressure / hectic activities in the ship exposed to stress with mean value of 3.6321 and a standard deviation of 0.6997. As per (Pihie, 2009), the mean value 3.6321 lies within the high-level range. This can interpret, presence of time pressure /hectic activities is high-level stressors of seafarers, and its presence highly exposed seafarers to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job as the mean value 3.9894 falls under high level and a standard deviation of 1.9678.

Moreover, the safety and health policy on the vessel addressing the issues of stress generated from time pressure / hectic activitieslies with mean value of 2.5802 and a standard deviation of 0.9227. As mean value, 2.5802 lies within the moderate-level range the safety and health policy on the vessel addressing the stress generated from time pressure / hectic activities is moderate.

Here the presence of time pressure / hectic activities in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

Presence of high volume of work in the ship exposed to stress with mean value of 3.6179 and a standard deviation of 0.7156. As per (Pihie, 2009), the mean value 3.618 lies within the high-level range. This can interpret, high volume of work in the workplace is high stressors of seafarers, and its presence highly exposed seafarers to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job as the mean value 3.9947 falls under high level and a standard deviation of 1.9608.

Moreover, the safety and health policy on the vessel addressing the issues of stress generated from high volume of worklies with mean value of 2.5943 and a standard deviation of 0.8899. As mean value, 2.5943 lies within the moderate-level range the safety and health policy on the vessel addressing the stress generated from high volume of work is moderate.

Here the presence of high volume of work in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

Presence of lack of independence in the ship exposed to stress with mean value of 3.6321 and a standard deviation of 0.6997. As per (Pihie, 2009), the mean value 3.6321 lies within the high-level range. This can interpret, presence of lack of independence in the workplace is high stressors of seafarers, and its presence highly exposed seafarers to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job as the mean value 3.9894 falls under high level and a standard deviation of 1.96780.

Moreover, the safety and health policy on the vessel addressing the issues of stress generated from ship lack of independencelies with mean value of 2.5660 and a standard deviation of 0.86555. As mean value, 2.5660 lies within the moderate-level range the safety and health policy on the vessel addressing the stress generated from lack of independence is moderate.

Here the presence of lack of independence in ships is high stressors and the safety and health policy on the vessel addressing this issue is moderate as result the seafarers exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The effect of these particularly reduced the performance of the seafarers and generally the productivity of ESLSE.

4.6.4.3.Correlation Analysis for high work demand & its predictor factors

Correlation procedures vary depending on data type. This study used an interval data. Therefore, Pearson's Product Moment Coefficient (r) is the appropriate statistical procedure to measure the degree of association between two interval variables. Table 4.6.1.3 below displays the bivariate correlation results for the data collected on the criterion variable on high work demand and its predictor variables. (Cohen, 1998) cited by (Warokka et al. 2012), interpreted the coefficient of correlation between 0 and 1 as in the following manner. The correlation coefficient (r) ranging from 0.10 to 0.29 may regarded as indicating a low degree of correlation, r ranging from 0.30 to 0.49 may considered as a moderate degree of correlation, and r ranging from 0.50 to 1.00 may regarded as a high degree of correlation. Considering the relationship of the high work demand with each of the predictor factors as shown below:

Pearson's bivariate correlation for high work demand factors

Correlations

Item		Time pressure	Time pressure exposed to what	Safety and health policy	High volume of work is major stressor	High volume of work exposed to	Safety and health policy	Lack of independence is major stressor	Lack of independence exposed to what.	Safety and health policy
Time pressure / hectic activities is major stressor.	Pearson Correlation	1	.285**	0.053	.144*	.163*	0.018	.487**	.188**	0.056
	Sig. (2-tailed)		.000	.440	.036	.025	.795	.000	.009	.418
Time pressure exposed to sick leave, medical unfit, disobedient, poor motivation, etc	Pearson Correlation	.285**	1	-.219**	.032	.158*	-.064	.188**	.431**	-.128
	Sig. (2-tailed)	.000		.002	.662	.040	.382	.009	.000	.080
Safety and health policy	Pearson Correlation	.053	-.219**	1	.000	.002	.103	.061	-.072	.335**
	Sig. (2-tailed)	.440	.002		1.000	.982	.134	.380	.323	.000
High volume of work is major stressor.	Pearson Correlation	.144*	.032	.000	1	.288**	.046	.646**	.075	-.016
	Sig. (2-tailed)	.036	.662	1.000		.000	.508	.000	.307	.812
High volume of work exposed to sick leave, medical unfit, disobedient, poor motivation, etc	Pearson Correlation	.163*	.158*	.002	.288**	1	-.294**	.234**	.754**	-.213**
	Sig. (2-tailed)	.025	.040	.982	.000		.000	.001	.000	.003
Safety and health policy	Pearson Correlation	.018	-.064	.103	.046	-.294**	1	.010	-.219**	.693**
	Sig. (2-tailed)	.795	.382	.134	.508	.000		.881	.002	.000
Lack of independence on the ship is major stressor.	Pearson Correlation	.487**	.188**	.061	.646**	.234**	.010	1	.285**	.048
	Sig. (2-tailed)	.000	.009	.380	.000	.001	.881		.000	.486
Lack of independence exposed to sick leave, medical unfit, disobedient, poor motivation, etc	Pearson Correlation	.188**	.431**	-.072	.075	.754**	-.219**	.285**	1	-.285**
	Sig. (2-tailed)	.009	.000	.323	.307	.000	.002	.000		.000
Safety and health policy	Pearson Correlation	.056	-.128	.335**	-.016	-.213**	.693**	.048	-.285**	1
	Sig. (2-tailed)	.418	.080	.000	.812	.003	.000	.486	.000	

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

The coefficient of correlation between stressor of time pressure/hectic activities in the ships and its exposition to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job is r=.285** at level of significance p=0.00. This means there is high degree of direct or positive relationship between these two factors and there is indirect or negative relationship with safety and health policy on the vessel as coefficient of correlation r= -.219 ** at level of significance p=0.00 implies high degree of indirect or negative relationship. From this, one can concluded that, the presence of time pressure/hectic activities directly or positively related to its exposition to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job and negatively or inversely related with safety and health policy on the vessel.

The coefficient of correlation between stressor of lack of independence in the ships and its exposition to sick leave, medical unfit, disobedient, poor motivation, sign off from the ship, unable to do job properly and dislike the job is r=.285**at level of significance p=0.00. This means there is high degree of direct or positive relationship between these two factors and there

is indirect or negative relationship with safety and health policy on the vessel as coefficient of correlation r= -.285** at level of significance p=0.00 implies high degree of indirect or negative relationship. From this, one can concluded that, the presence of ship movement directly or positively related to its exposition to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job and negatively or inversely related with safety and health policy on the vessel.

4.7. Regression analysis of physical stressors

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.896[a]	.803	.791	.24124	.803	66.691	9	147	.000	1.760

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34.931	9	3.881	66.691	.000[b]
	Residual	8.555	147	.058		
	Total	43.486	156			

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant)	.040	.242		.164	.870		
Heat on the ship is major stressor.	.131	.046	.109	2.823	.005	.894	1.119
Heat on the vessel exposed to	.094	.011	.350	8.563	.000	.800	1.250
The safety and health policy	.134	.024	.220	5.619	.000	.871	1.148
Noise on the ship is major stressor.	.134	.053	.112	2.530	.012	.688	1.454
Noise on the vessel exposed to	.063	.018	.233	3.409	.001	.287	3.483
The safety and health policy	.059	.037	.101	1.578	.117	.327	3.056
Ship movement on the ship is major stressor.	.086	.031	.120	2.769	.006	.713	1.402
Ship movement on the vessel exposed to what.	.141	.019	.516	7.529	.000	.285	3.514
The safety and health policy	.137	.037	.239	3.738	.000	.327	3.059

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.2221	4.3840	3.4182	.47320	157
Residual	-1.34419	.92127	.00000	.23418	157
Std. Predicted Value	-2.528	2.041	.000	1.000	157
Std. Residual	-5.572	3.819	.000	.971	157

4.8. Regression analysis of psychosocial stressors

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.887[a]	.787	.775	.27048	.787	65.782	9	160	.000	1.612

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.313	9	4.813	65.782	.000[b]
	Residual	11.705	160	.073		
	Total	55.018	169			

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.094	.226		.419	.676		
Long working on the vessel is major stressor.	.115	.056	.097	2.074	.040	.604	1.657
Long working on the vessel exposed to what.	.085	.013	.302	6.720	.000	.658	1.519
The safety and health policy on the vessel	.139	.029	.206	4.836	.000	.736	1.359
Lack of sleep on the vessel is major stressor.	.094	.061	.081	1.539	.126	.478	2.092
Lack of sleep on the vessel exposed to what.	.085	.019	.299	4.564	.000	.311	3.217
The safety and health policy on the vessel	.118	.036	.185	3.272	.001	.414	2.416
Loneliness on board is major stressor.	.131	.070	.110	1.858	.065	.376	2.657
Loneliness on board exposed to what.	.108	.020	.381	5.509	.000	.278	3.601
The safety and health policy on the vessel	.101	.041	.148	2.470	.015	.369	2.708

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.0485	4.4799	3.4235	.50625	170
Residual	-2.12161	.99332	.00000	.26318	170
Std. Predicted Value	-2.716	2.087	.000	1.000	170
Std. Residual	-7.844	3.672	.000	.973	170

4.9. Regression analysis of Social Stressors

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.814[a]	.663	.643	.33756	.663	33.066	9	151	.000	2.147

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.910	9	3.768	33.066	.000[b]
	Residual	17.206	151	.114		
	Total	51.116	160			

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.607	.325		1.867	.064		
Separation from family is major stressor.	.321	.061	.268	5.259	.000	.855	1.169
Separation from family exposed to	.199	.015	.702	13.195	.000	.789	1.268
The safety and health policy.	.213	.033	.330	6.438	.000	.851	1.175
Long stay on board is major stressor.	-.055	.084	-.048	-.651	.516	.413	2.423
Long stay on boardexposed to what.	.027	.023	.095	1.181	.239	.342	2.922
The safety and health policy.	.047	.052	.070	.912	.363	.377	2.654
A conflict of crewmembers	.101	.083	.093	1.219	.225	.385	2.598
Conflicts of crewmembers exposed to	-.037	.024	-.130	-1.567	.119	.326	3.069
The safety and health policy	-.005	.049	-.008	-.108	.914	.365	2.739

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.2712	4.3842	3.3956	.46037	161
Residual	-1.42269	1.18813	.00000	.32793	161
Std. Predicted Value	-2.442	2.147	.000	1.000	161
Std. Residual	-4.215	3.520	.000	.971	161

4.10. Regression analysis of High work demand

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.241[a]	.058	.005	.59694	.058	1.099	9	160	.366	2.123

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.525	9	.392	1.099	.366[b]
	Residual	57.015	160	.356		
	Total	60.539	169			

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.458	.497		4.943	.000		
Time pressure is major stressor.	.013	.122	.010	.104	.918	.604	1.656
Time pressure exposed to what.	.037	.027	.126	1.357	.177	.687	1.456
The safety and health policy	.050	.055	.077	.920	.359	.835	1.198
High volume of work is major stressor.	.069	.135	.057	.513	.609	.483	2.072
High volume of work exposed to	-.051	.041	-.172	-1.259	.210	.316	3.164
The safety and health policy	-.029	.079	-.043	-.369	.713	.433	2.310
Lack of independence is major stressor.	.045	.155	.036	.289	.773	.377	2.655
Lack of independence exposed to	.035	.043	.119	.826	.410	.281	3.554
The safety and health policy	.101	.086	.143	1.184	.238	.403	2.482

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.9231	3.6808	3.3320	.14442	170
Residual	-1.59995	1.33618	.00000	.58083	170
Std. Predicted Value	-2.832	2.415	.000	1.000	170
Std. Residual	-2.680	2.238	.000	.973	170

Objective Four: To assess presence of high work demand, how it addresses in safety and health policy and its effect on performance.

As it discussed above, confidenceinterval estimate for differentiation on high work demand indicated that the mean difference for each of the factors lies between the lower and the upper limits of the 95% confidence interval of the difference. This indicates the sample mean of the survey represents the population of mean at a level of 0.000, significance.

Presence of time pressure/hectic activities with mean value 3.6321, existence of high volume of work with mean value 3.6179, and occurrence of lack of independence with mean value 3.6321 has high on exposing seafarers to stress as the mean value of these falls under high level of the standard. And the safety and health policy addressing the issues of time pressure/hectic activities with mean value 2.5802, high volume of work with mean value 2.5943 and lack of independence withmean value of 2.5660 has moderate effect as the mean score value falls under moderate.

This means the safety and health policy on the ship not well addressing the issues of time pressure/hectic activities, high volume of work, and lack of independence. Because of this, seafarers highly exposed to sick leave, medical unfit, disobedient, poor motivation, and sign off from the ship, unable to do job properly and dislike the job. The cumulative effect of this reduced productivity of the company in general and the individual performance in particular.

4.11. IMPLICATIONS FOR FUTURE RESEARCH

A larger population can studied to analyze the impact of job stress on employees' job performance. Various other parameters such as role conflicts, autonomy, low salaries, technological change etc. can be explored which can focus on the job stress-free management of work-life balance and remedies for job stress mitigation

CHAPTER FIVE

5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1. SUMMARY

The objective of the study was to identify the physical, social, psychosocial, and high work demand stressors and their influence level in exposing seafarers to stress and how safety and health policy address its effect on the performance of seafarer's.; a case study of Ethiopian shipping and logistics service enterprise. Thevariables werephysical stressors, psychosocial stressors, social stressors, high work demand.

The study thoroughly assessed these factors and discussed the extent to which they exposed seafarers for stress and performance related issues within the shipping industry. The study also looked at major theories: psychological job control theory, motivation and work-family perspectives theory, psychoanalytic theory on counseling, Adlerian theory on counseling, cognitive theory of psychological stress and coping and stress-response theory.

The study targeted population included engine department, deck department, andcatering department. Questionnaire used as a major instrument to obtain primary data. The questionnaire was designed using Likert scale ranging from 1-3, 1-4 and 1-5 respectively. 36questionnaires distributed for the data gathering of which 212 of the respondents participated in the survey. The data analyzed using Statistical Package for Social Sciences (SPSS) and Microsoft Excel 2013.

The findings revealed the five variable and their attributes. The physical stressors that encompass presence of heat in workplaces, occurrence of noise, happening of ship movement orseasickness were assed. Psychosocial stressors that include availability of shift work, existence of long working days and lack of sleep were assed.

The third variable social stressors, which classified as separation from their family, long stay on board, conflicts between crewmembers and isolation were assed. The fourth variable studied here high work demand thatinclude time pressure or hectic activities,high volume of work, lack of independence The findings revealed that in most of the variable studiedseafarers are exposed to stress and their management practice has influence on the performance.

5.2. CONCLUSIONS

This study targeted to assess the stressors factors and their management practice in relation to seafarer's performance; a case study of Ethiopian shipping and logistics service enterprise.

The first variable to be assed here the physical stressors whichexpressed in terms of presence of heat in workplaces, occurrence of noise, happening of ship movement / sea sickness, were assed.

The physical stressors studded findings shows occurrence of heat, ship movement or seasickness, noise, respectively was exposing seafarer's employee to stress. Moreover, the stress management practice by ESLSE related to reducing, managing, and controlling the situation was not satisfactory.

psychosocial stressstuddedfindings shows occurrence long working days and possibility of lack of sleep and presence of shiftwork was exposing seafarer's employee to stress and the stress management practice by ESLSE related to reducing, managing, and controlling the situation was not satisfactory.

social stressstuddedfindings shows existence of separation from family, long stay on board, existence of isolation, presence of conflict between crewmembers was exposing seafarer's employee to stress respectively. Moreover, the stress management practice by ESLSE related to reducing, managing, and controlling the situation was not satisfactory.

high workdemand studdedfindings shows lack of independence, existence of high volume of work, burden of high responsibility and existence of time pressures was exposing seafarer's employee to stress respectively. Moreover, the stress management practice by ESLSE related to reducing, managing, and controlling the situation was not satisfactory.

5.3. RECOMMENDATION

Based on the findings of the study, the following recommendations forwarded:

- Ethiopian Shipping and Logistics Service Enterprise, (ESLSE) should invest more on health safety protection materials in order to save its seafarers employee from stress.The physical stressors, whichexpressed in terms of presence of heat in workplaces, occurrence of noise, happening of ship movement / seasickness, can be reduce, managed, and protected by the help of protective device.
- In order minimize the work related stress and enhance the performance of seafarers ESLSE has to implement time management.
- create suitable rest room and rest time, prepare new stress management guideline or has to revised the existing one to tackle stress related with psychosocial stressors which include availability of shift work, existence of long working days and lack of sleep were assed.
- As the nature of the job forced seafarers far away from their families and beloved ones for minimum of 4 to 6 months they are exposed to social stressors which include separation from their family, long stay on board, conflicts between crew members and isolation happened. To minimize such issues ESLSE has to create conducive working environment as motivation and satisfaction of the seafarers like giving permission for families to visit on board and other communication mechanism has to implement.
- Ethiopian Shipping and Logistics Service Enterprise (ESLSE) have to be work more on improving the existing stress problem and the stress management practice currently exercised. In addition,ESLSE should check its chain of command and power ofauthority in related with its daily work in order to come up with solution for high work demand factors. That includes time pressure / hectic activities, high volume of work, high responsibility,and pressure due to decision-making, lack of independence.

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APPENDIX 1:

Introductory Letter to Respondents

Dear Respondent,

I am a postgraduate student in the department of Human Resource Management in Addis Ababa University School of Commerce. Currently, I am undertaking a research study on, "An Assessment of Stress on Ship and its Effect on Performance of Seafarers: A Case of Study Ethiopian Shipping and Logistics Service Enterprise.

The purpose of this questionnaire is to collect data for purely academic purposes and your opinions, responses and views are very important to this study and will treated with the utmost confidentiality. Kindly spare a few minutes and complete this questionnaire. I would highly appreciate if you assist me by responding to all questions as completely, correctly and honestly as possible.

Thank you very much for your participation, cooperation, and understanding.

If you need further explanation or questions, please do not hesitate to contact me by below cell phone.

Yours faithfully,

Hailemariam Abera Bekele
Mobile, 0913565968

OCTOBER 2022

APPENDIX 2:

QUESTIONNAIRE

Answer all questions as indicated by either filling in the blank or ticking the options that apply.

SECTION A: BACKGROUND INFORMATION OF RESPONDENTS

1**. Sex of Respondent:**

1. Male { } 2. Female { }

2**. Age of Respondent:**

1. Less than 24 years { } 2. 25 – 29 years { } 3. 30 – 45 year { } 4. 46 – 50+ years { }

3**. Level of Education Acquired:**

1. Diploma { } 2. First Degree { } 3. Post Graduate Degree { } 4. Other (Specify) _____

4**. Department:**

1. Engine Department { } 2. Deck Department { } 3. Catering Department { }

5**. What is your position/status in the Ship?**

1. Captain { } 2. Engineer { } 3. Officer { } 4. Steward { } 5. Able seaman { }
6. Electrician { } 7. Chief Cook { } 8. Mess man { } 9. Ordinary seaman { }

6**. How many years have you worked in the ship?**

1. Over 10 years { } 2. 6 – 9 years { } 3. 3 – 5 years { } 4. Less than 2 years { }

SECTION B: PHYSICAL STRESSORS

1. Among the physical stressors, the presence of heat on the ship is major stressor. To what level do you agree or dis-agree?

   1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
   4. Agree { } 5. Strongly Agree { }

2. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

3. The safety and health policy on the vessel address the issues of stress generated from heat. To what level do you agree or dis-agree?

   1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
   4. Agree { } 5. Strongly Agree { }

5. Among the physical stressors, the presence of noise on the ship is major stressor. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

5. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

6. The safety and health policy on the vessel address the issues of stress generated from noise. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

7. Among the physical stressors, the presence of ship movement / seasickness on the ship is major stressor. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

8. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

9. The safety and health policy on the vessel address the issues of stress generated from ship movement / seasickness. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

SECTION C: PSYCHOSOCIAL STRESS

10. Among the psychosocial stressors, the presence of long working on the vessel is major stressor. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

11. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

12. The safety and health policy on the vessel address the issues of stress generated from long working. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

13. Among the psychosocial stressors, lack of sleep on the vessel is major stressor. To what level do you agree or dis-agree?

2. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

14. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

15. The safety and health policy on the vessel address the issues of stress generated from lack of sleep on the vessel. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

16. Among the psychosocial stressors, the presence of loneliness on board is major stressor. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

17. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

18. The safety and health policy on the vessel address the issues of stress generated from loneliness on board. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

SECTION D: SOCIAL STRESSORS

19. Among the social stressors, the presence of separation from family is major stressor. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

20. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

21. The safety and health policy on the vessel address the issues of stress generated from separation from family. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree 5. Strongly Agree { }

22. Among the social stressors, long stay on board is major stressor. To what level do you agree or dis-agree?

3. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

23. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

24. The safety and health policy on the vessel address the issues of stress generated fromlong stay on board. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree 5. Strongly Agree { }

25. Among the social stressors, the presence of conflicts between crewmembers and isolation on board is major stressor. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

26. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

27. The safety and health policy on the vessel address the issues of stress generated from conflicts between crewmembers and isolation on board. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

SECTION E: HIGH WORK DEMAND

28. Among the high work demand, the presence of time pressure / hectic activities on the ship is major stressor. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

29. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

30. The safety and health policy on the vessel address the issues of stress generated from time pressure / hectic activities. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

31. Among the high work demand, the presence of high volume of work on the ship is major stressor. To what level do you agree or dis-agree?

Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

32. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

33. The safety and health policy on the vessel address the issues of stress generated from high volume of work. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

34. Among the high work demand, the presence of lack of independence on the ship is major stressor. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

35. If your answer for the above question is agree, what happen to you? Please specify_____
_____::

36. The safety and health policy on the vessel address the issues of stress generated from lack of independence on the ship. To what level do you agree or dis-agree?

1. Strongly disagree { } 2. Disagree { } 3. No opinion or uncertain { }
4. Agree { } 5. Strongly Agree { }

END OF QUESTIONNAIRE

Thanks for your time and participation!