

A Study on Challenges and Opportunity of Women Employability in Gujarat Maritime Sector

A Thesis submitted to Gujarat Technological University

For the Award of

Doctor of Philosophy

In
Management

By
Major. Ashish Mishra
(179999903002)

Under the supervision of

Dr. Jigna Trivedi

Supervisor



**GUJARAT TECHNOLOGICAL UNIVERSITY
AHMEDABAD**

[July-2022]

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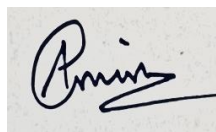
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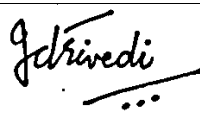


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ABSTRACT

The role of women is indispensable in the societal growth and development. Her immense tender care and household responsibility are treated as non-economic and is not considered as a part of Gross Domestic Measurement. In terms of employment the fairer sex is often discriminated against the male dominant cadre. Gender Inequality is often depicted in terms of selection, promotion and pay related matters. Absorption of women in maritime sector in ancient time was often considered as an evil, today only two percent at world level and only one percent at India level is employed in marine sector. The world considers that employability of women in maritime sector is full of psychological and physiological challenges, which would act as hindrance in performance and hence she is not absorbed in the most lucrative sector. Present research tries to explore the literary work in areas of studies on, challenges faced by women at sea and the career opportunities of women in marine sector. The research highlights that The Feminist Theory would provide an appropriate base to study in the parameters which would be responsible for not employing women in maritime sector.

Various issues working women are facing are correlated to our studies on Women in Maritime sector, the society, culture, responsibilities at home, changing social norms , gender imbalance and women adjusting and adapting to the new norms are highly visible in most of the studies, further there is a clear need visible from the studies undertaken that vivid areas of Women in Maritime sector in India needs in-depth research considering the potential of India and dearth of talent pool available in world maritime fleet India and Women seafarer are definitely going to start a new voyage in the world maritime history. The research in progress has a potential to give insight on the various issues hindering the entrance and sustenance of women in Maritime sector and may provide a valuable input to the regulatory and governing bodies in order to charter various guidelines and policy decisions.

Therefore, in this research an attempt has been made to find out the reasons for low women employability in maritime sector of Gujarat. It would highlight the issues faced by women in maritime sector, policy initiatives that could be taken to boost women employability in maritime sector and developing courses which would impart skill and make the workforce ready for immediate absorption in maritime sector.

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CHAPTER-1

INTRODUCTION

1.0 Primer

Covering over 70% of Earth's surface, oceans are a natural asset, which, along with soils and forests, make up the world's stock of natural capital. These natural assets generate vital ecosystem goods and services, such as food, climate regulation, coastal protection, and cultural value that support planetary life and human survival and well-being worldwide (Sumaila *et al.*, 2021). India is the third largest of the world's five ocean divisions. The Indian Ocean Sea routes are important and valuable, as it accounts for more than 80% of the global trade. The Indian Ocean connects the Middle East, Africa, and East Asia to Europe and the Americas via major sea routes. With a coastline of approximately 7,517 kilometres, India is the world's sixteenth-largest maritime country (Agarwal, 2021).

In terms of trade, over 80% of the volume of international trade in goods is carried by sea, and the percentage is even higher for most developing countries (United Nations Conference on Trade and Development, 2021). Globally, the market value of marine and coastal resources and industries is estimated at three trillion dollars per year or about five percent of global GDP (Sustainable Development Goals, n.d.). To support world economies, shipping has developed highly sophisticated logistics chains delivering just-in-time parts and goods to manufacturers and consumers. Maritime transport continues to grow, benefiting consumers all over the world. Shipping also offers the cheapest mode of transport. (International Chamber of Shipping, n.d.). The prospects for the industry's future growth remain bright, owing to the increasing efficiency of shipping as a mode of transportation and increased economic reform. There are over 50,000 merchant ships trading internationally, transporting every kind of cargo. The world fleet is registered in over 150 nations and manned by over a million seafarers of virtually every nationality (International Maritime Organization, n.d.). In India, 95% of India's trading by volume and 68% by value is done through maritime transport (Ministry of Ports, Shipping and Waterways, 2021).

An estimated 40% of the world's offshore oil production comes from the Indian Ocean (International Chamber of Shipping, 2012).

Gujarat has the longest coastline in India, stretching 1600 kilometers with biggest maritime-based industries, and is the nearest maritime outlet to Middle East, Africa and Europe (Gujarat Ecology Commission, 2012). The state has the highest number of 48 operational ports and commercial cargo ports (Gujarat Maritime Board, n.d. and Gujarat Infrastructure Development Board, n.d.). Gujarat accounts for 40 % of the maritime trade of India and has a first independent regulatory body in the country. Kandla is the biggest port of Gujarat. The state handles around 8.5% of the nationwide shipping cargo, i.e. 16 million tons of cargo. Gujarat alone handles the 70% of the total cargo in comparison to the collectively handling of cargo by the minor ports of India (Gujarat Infrastructure Development Board, n.d.). The state is unique in having world's largest grassroots oil refinery, the world's largest shipbreaking yard, various first of its kind maritime initiatives and is considered as the maritime hub of India.

1.1 Growth Of The Sector

The Indian ports and shipping industry plays a vital role in sustaining growth in the country's trade and commerce. The sector is growing very rapidly with government intervention at national level and across the coastal region of the country. A brief statistics of Maritime India Vision target for year 2030 is as per the table 1-1.

Table 1- 1 Maritime India Vision 2030

Key Performance Indicator	Current (2020)	Target (2030)
Major ports with >300 MTPA cargo handling capacity	-	3
Percentage of Indian cargo transshipment handled by Indian ports	25%	>75%
Percentage of cargo handled at Major ports by PPP/ other operators.	51%	>85%
Average vessel turnaround time(containers)	25 hours	<20 hours
Average container dwell time	55 hours	<40 hours
Average ship daily output (gross tonnage)	16,500	>30,000
Global ranking in ship building and ship repair	20+	Top 10
Global ranking in ship recycling	2	1
Annual cruise passengers	4,68,000	>15,00,000
Percentage share of Indian seafarers across globe	12%	>20%
Percentage share of renewable energy at Major ports	<10%	>60%

(Source: Ministry of Ports, Shipping And Waterways, 2021)

The above statistical data demonstrates the sector's massive growth and a plethora of job opportunities. India has undertaken massive projects like "Sagarmala" in 2015 and Maritime India vision 2030, wherein the sector is getting massive growth to various initiatives and infrastructure development.

1.2 Employability

Inter-country trade, good transportation, and the import/export of livelihood items are all impossible without shipping. Globally there are around 1.9 million seafarers working to facilitate the way we live. The United Nations Conference on Trade and Development (2021), estimates the global supply of seafarers at 1,892,720, up from 1,647,494 in 2015. Of these, 857,540 were officers, and 1,035,180 were ratings – the skilled seafarers who carry out support work (BIMCO, n.d.). The shipping industries are expanding, and as a result, the supply of officers is expected to increase steadily in the future. It is predicted that the demand for manpower will rise in the near future. BIMCO report 2021, states huge shortfall of manpower till 2026 and there exists no dearth of employment irrespective of gender.

India is the third-largest supplier of seafarer, accounting for 9.35 percent of the global workforce (Directorate General of Shipping, n.d.). Indians are preferred to be hired by most multinational companies. India is ranked amongst the top three countries supplying trained manpower, with 17% growth in seafarers in the last 3 years. The number of Indian seafarers employed on Indian and foreign-flagged ships has crossed 150,000 for the first time, with 37,259 of them getting jobs in the last three years alone, as per the Directorate General of Shipping (DGS). Further as per Government of India flag ship project "Maritime India Vision 2030" and "Sagarmala project launched in 2015", huge employment generation is with approx. 40 lakhs direct and 60 lakh indirect jobs in maritime sector expected (Port and Shipping Sector, 2016) and (Maritime Sector, 2021).

1.3 Gender Parity

The percentage of women seafarers as per the latest Baltic and International Maritime Council (BIMCO) report is 1.28% (ICS, 2021) with estimated number of 24,059 female seafarers working in the sector. There are no concrete reasons in terms of capability and skills as the sector now does not need any gender-specific requirement. Still the numbers of females are very meager. Most of the study conducted at the global level to understand the problem areas by the world bodies like the United Nations (UN), International Maritime Organization (IMO), International Labour

Organization (ILO), United Nations Conference on Trade and Development (UNCTAD) etc. tried to explore the reasons for low participation and all have been constantly putting efforts to increase the participation of women in maritime sector. Especially in last three decades, various programs, initiatives, studies conducted in various countries were carried out to address the issue of low women participation (Mishra & Trivedi, 2021). In 2019, "Empowering Women in the Maritime Community" was selected as the World Maritime Day theme for 2019 by IMO. This provided an opportunity to raise awareness of the importance of gender equality, in line with the United Nation's Sustainable Development Goals (SDGs) program, and to highlight the important contribution of women all over the world to the maritime sector. (International Maritime Organization, n.d.). In 2021, the IMO Assembly has adopted a resolution proclaiming 18th May every year from year 2022 onwards as an 'International Day for Women in Maritime'. Further, various maritime education institutes are involved in the process to increase the participation of women in the institutes and raising awareness, scholarships and other incentives are provided at undergraduates and post graduate courses to female students. World maritime university (WMU) and International Maritime Law Institute (IMLI) have set specific targets for themselves and are leading by example in their effort to increase the female students (International Maritime Organization, n.d.).

In India the status of employability of female is further low. As per D. G. Shipping in 2017 out of total 154,349 active seafarers only 810 were women seafarers including hospitality crew are employed, which is less than 0.5% of seafarers' population in country. Further, on shore-based job also the percentage is very low, although, specific statistics are not available (Gupta, 2021). The number of female students is also very low in maritime institutes, although there is no difference in the quality of human resource required based on gender (Maritime Institute of Technology and Graduate Studies, 2021).

1.4 Need For The Research

Globally very limited studies have been conducted on this subject, in Indian context, barely any studies have been observed and with respect to Gujarat, no such study related to employability of women in maritime sector has been observed. Accordingly, the area that has vast scope of opportunity in employment presently as well as in future and wherein females are devoid of these opportunities. As per the statistics of 2020, the women population consists of 48.04% (Trading

Economics, n.d.) of the total population of India. There is a specific need for the research to benefit such a huge number.

The Maritime sector although as an occupation has historically been a male dominated industry which has the lowest number of women workforce and that tradition runs long (Lares, 2017). UN has been concentrating since 1988 for increasing the participation of women in maritime sector. The first globally recognized initiative was taken by IMO only in year 1988 known as “Integration of Women in the Maritime Sector”. Since then IMO, ILO, WMU, various NGO’s and private sectors have been consistently working towards the mission. Various programs, conferences, guidelines and women associations in maritime launched across the world but even after three decades of International Organization’s intervention the percentage of women in Maritime sector is below two percent only (Mishra and Trivedi, 2021). Further, in developing countries the percentage is further low. In India it is less than one percent (Gupta, 2021 and Kumari, 2019).

Although, in terms of skill sets required there is no gender difference. Therefore, it is important to conduct study to understand the factors that desist employment of women in maritime sector.

The sector is growing leaps and bounds globally and in context with India, millions of jobs are expected in this decade (Kumari, 2019). Thus, there exist a huge opportunity for females in the sector to mark their presence although only in case the reasons and limitations can be addressed well in time. Thus, it seems very important to have detailed study on the subject.

Various researches conducted globally have recommended a need for exploration of such type of research in the developing countries. Various theories exist to explain the low participation and discrimination of women in the conventional sectors. The most prominent feminist theory highlights the reasons for low participation of women in the workforce in the conventional sector. The same theory may be applied to study the reasons for low work-participation of women in the maritime sector. Most of the research globally conducted highlights various issues in employability of women in maritime sector, but no study till date has covered both sea based and non-sea based limitations for employability of women in maritime sector. The study chosen here covers students, alumni, working women, recruiters and port-based organizations for both sea-based jobs and non-sea-based jobs that gives holistic approach towards supply side of employments, demand side of employment and challenges and opportunities with the existing female employed population in maritime sector.

1.5 Outline Of The Research

The research is divided into three parts of analysis. The analysis comprises of the students and alumni, recruiters, females employed in maritime sector for sea based as well as non-sea-based jobs.

From the supply side, the students in maritime sector are surveyed through the mode of structured questionnaire. Further, the students in maritime sector are divided in two parts; existing students and alumni students which is further bifurcated into students and alumni in sea based jobs and non-sea based jobs. The aim was to deduce, perceived challenges and opportunities that may be faced by existing students in non-sea-based jobs and sea-based jobs and to deduce the challenges and opportunities faced by alumni in non-sea-based jobs and sea based jobs. The research was focused on exploring various parameters for preferring career in maritime sector like reasons for joining this sector, awareness about the sector and quality of training given at the institute. Secondly, the research focused on the existing female working population in sea based and non-sea-based jobs separately. The opportunities and challenges faced by both of them are totally different in nature, largely differs due to the place of work. Job peculiarities are totally different in both and the number of females are very low in both the jobs

Lastly, on the demand side the research is conducted to determine the perception of recruiters towards the employment of females and also to understand their limitations and organisation policies regarding hiring of females.

1.6 Significance Of The Research

Women make up a very small proportion of qualified workers in the maritime domain. Despite the continuous efforts of females trying to demonstrate their existence in the sector, women still face obstacles and glass ceiling in their career development and promotion in a male-dominated industry (Senbursa, 2020). Till date, women represent an untapped resource for joining the world maritime sector and addressing the current labour shortage. Further, the number and proportion of women cadets or students recruited in maritime education institutions confirms the equally low participation of female recruitment in the maritime industry (Dragomir *et al.*, 2018).

The research will prove significant to the Government and world maritime bodies in framing various women friendly policies, initiatives and guidelines to increase their participation and reduce various avoidable difficulties faced by them. Secondly the study will help maritime

institutes and similar training centres for increasing the number of female students and also developing an all-inclusive training programme. Lastly the females preparing to join the maritime sector are unaware of the sector will get benefit regarding the job roles, opportunities and challenges associated with the sector. The study will also prove significant in addressing the shortage of skilled employees in the world maritime sector by inclusion of an untapped resource.

1.7 Organization Of The Study

The current study in addition to the chapter Introduction, is divided into four more chapters and the chapters are organized in the following manner:

Chapter-2 Literature Review

This chapter delivers an exhaustive and comprehensive exploration in the form of literature review carried on by former academicians and scholars in the area of the maritime trade, job role in maritime sector, challenges in maritime sector, gender wise employment, women at sea, challenges to the women in maritime sector, opportunities for women in maritime sector, employers perception towards female employment, training institutes and women students in maritime and worldwide efforts to increase women participation, women in maritime sector, work-life balance etc. The map of literature review was prepared to execute the review of literary content in the proper way. The map highlighted the various theme of the research in the most effective way. The literature review included from ancient to the modern perspectives of the study. The literature comprised of the regional, national and international studies carried out in this area. The literature review exhaustively tries to appreciate the work of the other literary scholars and sharpen the gap for the present study. In the literature review for better understanding, it was supported with necessary diagrams where ever possible. Finally, the chapter concludes by finding out a research gap and need for the research. The diagram of the research gap highlights the content at the cursory glance.

Chapter-3 Research Methodology

The present chapter tries to describe the roadmap adopted for conducting the present research. It mainly describes the research questions adopted for the study. It explains the research design, research objectives, sampling design, method of data collection, technique of data management and analysis of the gathered data. The chapter at length also explains the designing of questionnaire and the framing of interview schedule. All the details right from framing the objective to the final methodology adopted for data analysis are explained in detail. The adoption of the method or

approach is supported with necessary justification. The research methodology is comprehensively drafted to clarify each method adopted in the course of the study.

Chapter-4 Data Analysis

The data analysis was covered from five dimensions viz., women working in non-sea based jobs, women working in sea-based jobs, perception of recruiters, opinion of existing students and alumni. The raw data collected from the primary sources, are analyzed to draw logical conclusion. The researcher had applied univariate, bivariate and multivariate statistics to analyze the data. The data is analysed using the descriptive and inferential statistics. Measures of Central Tendency such as Mean, Median and Mode and Measures of Dispersion such as Standard Deviation and Range were used for descriptive data analysis. The Kolmogorov-Smirnova Test and Shapiro-Wilk test, the Two-Way Chi-Square Test, the Fisher's Exact Test, Mann-Whitney U Test and the Spearman's Rank Correlation Test were also applied. To elaborate the data in a lucid manner, various tables were used to present the data in the tabular form, wherever possible. The exhaustive discussion of the same is presented in the chapter. Each question of the questionnaire was first analyzed individually and then the test was administered to derive better inferences from the data. The data analysis was carried out using frequency table, cross-tabulations, charts etc. Based on the usage of scale the descriptive statistics was applied to the data. Inferential statistics were applied considering the scale used in the research, it was also checked for the similarity with other studies. The interpretations of inferential statistics were also tried to match with the findings of the study conducted by different authors.

Chapter-5 Data Findings, Suggestions And Conclusion

Some comprehensive judgements, interpretations and annotations are offered in this chapter, from the data analysis of the former chapter. After doing the environmental scanning at the global, national and state level in particular, various suggestions are offered in the current study to overcome the bottlenecks. The findings of the complete analysis done, suggestions offered, limitations of the research, and the scope for further research are discussed in a nutshell in this chapter. The findings of the study are represented in a crisp manner. The suggestions cited in the study may be implemented at policy level, to promote employability of the women in the maritime sector. Initiatives to create awareness for maritime courses is the key suggestion to not only build skill but also increase the employability of women in the maritime sector.

Chapter-2

Literature Review

2.0 Background

The most intelligent species on earth “Human Beings” have consistently evolved and due to their nature of inquisitiveness they kept on developing further (Striedter, 2004). Over the period of time humans conquered from a small territory to a huge area and the never ending search of these species for reaching farther for something better was not possible with their physical limitations and that led to the discovery and invention of new and better modes of transport (Kellert, 2003). The various mode of transports wherein sea transport is known to be the most ancient, fastest and economical mode discovered and it still holds true till date (Paine, 2014). Land Transport especially after the invention of wheels gained momentum (Elert, 2011) and Air transport started lately in early 19th century is the fastest although expensive in the present scenario. The development of transport led to the complete revolution in the way mankind moves and the same led to humans explore the remotest corner of the world (Carter, Couch and O’Brien, 1988). Further space travel has even allowed human beings to go beyond the terrestrial level to reach moon and now far off planets (White, 1998). The Development of transport not only led to the human exploring and reaching far off place but has led to the revolution in terms of socio, economic, technological and environmental front (Park R. E., 1928).

2.1 Transport And Development

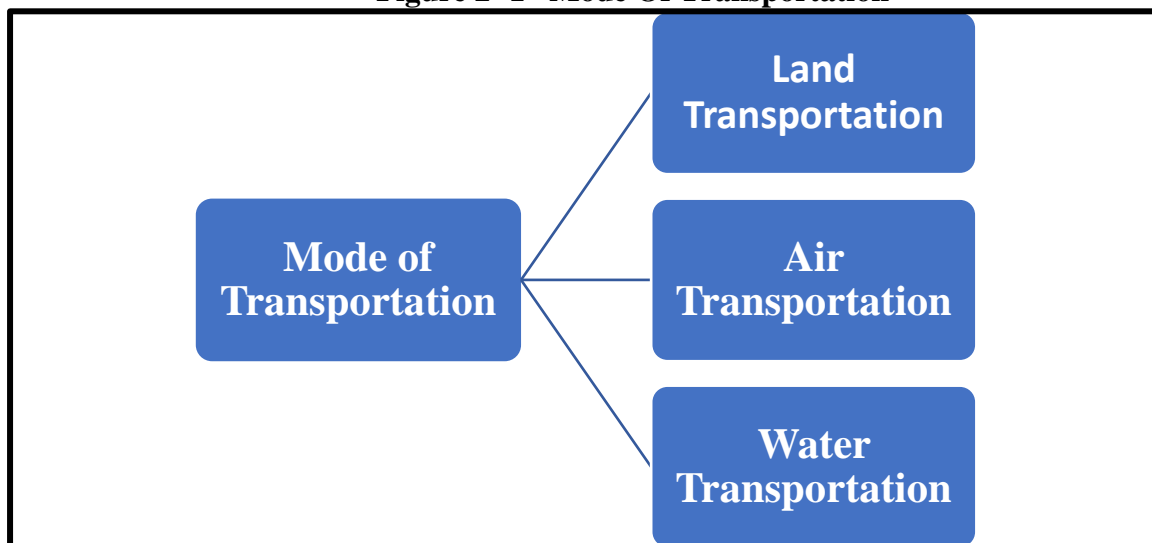
The transport, trade and development have been commonly used term together since ages, the transportation system has revolutionized the world economy and development process (Banister & Berechman, 1999). The faster, safer and convenient way of transferring people and goods led to various civilization coming together, interacting and dealing with the best of each other (Hoyle, 1973). The transportation system has a huge impact on the society, trade practices and economy of the world, in a nutshell the transport system, the mobility factor and momentum of cargo and public has a huge impact on the world economic system (Wackermann, 2010), there exist a direct relationship between transportation and economic development (Gauthier, 1970).

During the process of exploration humans wanted to know everything about the mother earth, its inhabitants, discover the truths and busted the myths. With development of transport system apart

from exploration; the trade and exchange of goods started taking place. Humans across the world wanted the best to be delivered to them right from the basic need of food, clothing and medical to the developmental and luxurious requirement. These requirements were fulfilled by the ever evolving transport system (Weidlich and Haag,1999). The transport system truly played a crucial and integral role in the overall development. Today the economies of developed, developing and under developed countries have a major relevance to the transport system of that country(Tolley and Turton,2014). The development and transport goes hand in hand, the prosperity and economic development of a country is primarily dependent on international and interregional trade and viewing the entire history down the line it has been found that shipping and ports are considered as major accelerators of local economic development in globalization times (Corbett and Winebrake, 2008).

The revolutionary inventions of several means of transportation brought in a massive transformation and extended the range of commercial and private activities that lead to exceptional levels of performance in terms of speed, quality of service, spatial division of activities and integrations of economic spaces (Grubler & Nakicenovic, 1991). The various modes of transport has its own importance and the usage is based on the same. A brief outline of different modes of transport and their development is described as below.

Figure 2- 1 Mode Of Transportation



(Source: Author's Own Compilation)

2.1.1 Land Transportation

The activity that involves physical movement of goods and services on land is referred to as land transportation facility. The movement happens through roadways, railways, ropeways or pipelines. The roadway transportation serves the mankind since 4000 years BC and is considered important for short distance transport of goods. This system is basically suitable for carrying heavily loaded and bulky articles and is convenient for short distance journeys and trips. Also the biggest advantage of this system is that it connects to the remotest of the locations of the country unlike other means of transport. However, the major drawback is that it contains high maintenance costs for vehicles and infrastructure (Rodrigue, Slack, & Comtois, 2017). The rail transportation occupies an important role in the land transport system for a country like India as it is the most dependable mode of transport to carry light and heavy goods and passengers over a long distance. The inception of this system took place in the 1851. Rail transport system is one of the largest employers of the country. Compared to road transport it is faster and saves energy and is environment friendly (Ramanathan & Parekh, 1999). Pipelines are used for various purposes such as water supply to residential and commercial areas, transportation of petroleum and natural gas. This is the most convenient economical mode of transport but also expensive in terms of its installation and maintenance. Ropeways is convenient mode of transport for connecting two places on hills and across a valley or river.

2.1.2 Air Transportation

The inception of air transport took place in 1911 and majorly the air transportation system categorized into domestic and international airways is the fastest mode of transport and carries Goods and passengers, precious articles and mails by using different aircrafts like passenger aircraft, cargo aircraft, helicopters etc. During natural calamities it is the most convenient mode and provides a vital support during national security and defence. The air transport is said to be the most expensive mode due to its state of the art construction (Graham, 1995). Air transport is an important enabler to achieving economic growth and development. Air transport facilitates integration into the global economy and provides vital connectivity on a national, regional, and international scale. It helps generate trade, promote tourism, and create employment opportunities (United Nations Conference on Trade and Development, 2010).

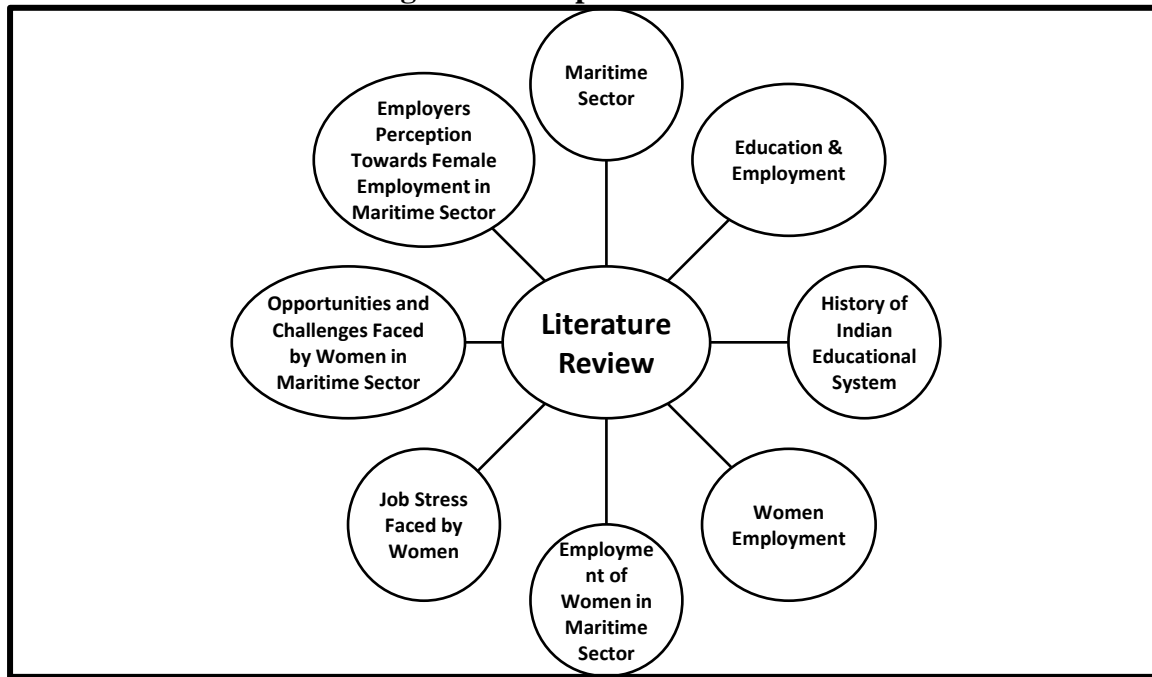
2.1.3 Water Transportation

The movement of goods and passengers on water through boats, steamers and ships is referred as water transportation. The water transport system is generally categorized into two kinds namely Inland water transportation and Ocean transportation. The inland water transport and water-based mobility is not much prevalent in India except in northern states and some parts of southern states (Sarkar *et al.*, 2007). Sea transport amongst the oldest means of transport and is least expensive although comparatively slow and risky mode. The advantages of this system are that it is the most economical mode of transport and caters most of the international trade. Trade through water transportation continues to expand, bringing benefits for consumers across the world through competitive freight costs (Selkou & Roe, 2004). The sea trade is the most dominant mode of transport with 90% of the majority of trade and movement of goods occurring in the world is seaborne (Martin, 2009), the same led us to look in depth about the role of sea trade from ancient time till date in bringing the revolution in development of human beings. Water transport additionally has an extremely low working expense. It has the best limit to bear the load and is accordingly most appropriate to moving colossal amounts of weighty things across significant distances. (Navata, n.d).

The recent illustration of using water ways was the Roll-on, Roll-Off (Ro-Ro) ferry service between Dahej (South Gujarat) and Ghogha (Saurashtra region) was started in Gujarat to boost trade and commerce. The objective of this service was to reduce the travel distance between two destinations via sea route to just 31 kms which was 310 kms approximately when traveled via road (National Herald, 2018). Such service aimed to benefit 12,000 people and 5,000 vehicles that ply between the two places (Nair, 2020).

The map of literature is represented in the Figure 2-2. It describes the snapshot of the major points that were covered in the literature review. The map also represents the sequence in which the literature review was carried out on the identified areas. A complete literature review was performed on the themes such as Marine Sector, Education and Employment, History of Indian Educational System, Women Employment, Employment of Women in Maritime Sector, Job Stress faced by women, Opportunities and Challenges faced by women in Maritime Sector and Employer's Perception towards female Employment in Maritime Sector. The detailed explanation of each point is discussed further.

Figure 2- 2 Map Of Literature Review



(Source: Author's Own Creation)

2.2 Maritime Trade An Ocean Of Opportunity In Development And Employment

The huge development of total populace resulting in expansion of energy need, both in creating and created nations, required an increment in the seaward investigation and creation of hydrocarbons i.e. discovery of crude. Another period of energy creation made conceivable numerous accomplishments in investigation, penetration, stockpiling and transportation methods equivalent to the space business, drawing numerous nations in oil boring task off the bank of 74 countries around the world. Around fifty thousand merchant ships, were enrolled in more than 150 countries and were monitored by over 1,000,000 sailors of virtually every ethnicity, were involved in the transportation of each sort of freight globally (International Chamber of Shipping, n.d.). A few thousand oil apparatuses and backing and supply seaward vessels were occupied with the investigation and boring for oil and gas were the activity carried out in every side of the globe. Almost 4,000,000 business fishing vessels handled the oceans and seas out of the blue. Also, a bunch of sporting boats (with around 45,000 exclusive boats worked out of the United States in December 2010) (World Wide Fund., n.d.), including a few hundred enormous and super voyage ships, offered the most enhanced relaxation and the travel industry administrations to an extending market. The concept of maritime tourism, costal tourism and cruise tourism has gained importance

(Thana, 2013). Sea exercises kept on extending, bringing benefits for individuals across the world. The trader naval force, seaward oil area, business fishery and voyage organizations were essential for the business of things to come, and the sea area was a critical impetus for financial turn of events and worldwide intensity in an evolving world, with new organizations and associations arising and setting up tasks in Europe, Asia and North America. In India, under the Sagarmala project in the last three years preceeding 2020, 10,000 jobs were created in the maritime sector (Equity Master, 2020).

2.2.1 Maritime Trade And Its Ancient Linkage

The earliest representations of the existence of maritime activities date from 3000 BC; maritime objects such as knives, scrapers and fish-hooks constituted the only evidence. The oldest specimens observed dated 8000 BC were made of obsidian, a hard volcanic stone, found on the island of Melos. With references and evaluation of early histories of world maritime , it was established that Mediterranean inhabitants initially explored sea for better food and afterwards conducted small-scale barter and went on further leading to wage piracy (Meijer, 2014).The classical trade linkage network during early history was observed at Indian Ocean , back almost 4000 years ago by seafarers sailing between Mesopotamia and the mouths of the Indus River (Paine, 2014).

A vast repository of ancient literature had random references to a brisk seafaring trade. Harivansh Purana mentioned that the prosperity of ‘Yadavas’ was due to the sea. Kautilya had also mentioned in his ‘Arthshashtra’ that the main occupation of people living on coastline was navigation. The most ancient civilization ‘India’ hds potentially grown and evolved due to its more than 5000 years old strong linkage to seas and maritime activities in association with ancient civilizations of Asia, Africa and Mediterranean regions and had contributed in the development of trade and commerce (Indian Navy, 1989).

In context of Gujarat the maritime and trade linkage was very glorious. The Bible referred to Phoenician sailors who sailed to Ophir (Abhira in Gujarat) and brought back treasures. The Greek Periplus of the Erythrean Sea provided many detailed references to the Gujarat seaports as Barygaza (Bharuch, Gujarat). Greek author Galazy had mentioned in his book ‘Batiyas’ about the shipping activity of Kachchha in circa 246. The well-known historian Huian-Tsang described Saurashtra as ‘Sa-la-ch‘a’ and referred it as the highway to the sea where all inhabitants were traders by profession.

2.2.2 Discovery And Development Of Continents And Countries

The sea farers and voyagers who due to their exploratory nature and by virtue of expansion of trade led to many discoveries and thus provided ample business and travel opportunities that were non-existent. The sea ports supported the early international trade between 16th to 18th centuries through European colonial empires (Rodrigue, 2013).

Australia, Africa, America, New Zealand and India were most of the countries discovered through sea routes and their connect to the rest of the world led to the earth becoming one planet having different continents and countries (Morrell, 2012).The sea voyages played a crucial role in connecting those countries through trade and business development. The maritime trade had led to expansion of world trade and economy, bringing the countries closer and exploration of new countries. The economy and trade between two countries which had sea connectivity was the most preferable trade route due to economy of cost and volume of trade, the same also led to movement of working personnel from one country to other for the trade, business or service-related opportunities (Findlay & O'Rourke, 2009).

2.2.3 Maritime Sector And Employment

The sea traders from ancient time generated lot of employment and long-term contracts due to the nature of jobs and long voyages. The journey through sea was always considered adventurous , full of risks and thus made it highly paid job (Orence & Laguador, 2013).With the invention of diesel engine the entire maritime trade, employment, volume of cargo, distances travelled and number of voyages by a vessel increased manifold.The capacity of vessel increased considerably with construction and deployment of Ultra and Very Large Crude Carriers size vessels (Merikas *et al.*, 2014). Majority of trade and movement of goods occurring in the world was seaborne (Martin, 2009). Marine transport served to be one of the most powerful transport systems in terms of gaining socio economic progression with reference to accessibility to markets, increase in employment opportunities and additional investments (Rodrigue, 2013). Further the allied services and business supporting maritime trade increased the employment to a gigantic number. The development of ports and maritime transport had a direct relation to the economy and employment opportunity of a country, port cities like Singapore, Hong Kong, Port of Rotterdam had their economies majorly based on the maritime sector and they are very robust economies in the world (Ducruet *et al.*, 2014). Basnayake (2008, p.1) stated that the world shipping owed much of its prosperity to the availability of strong work force in line with major expansions happening on global scale. A recent industry

study indicated that there were over 1.6 million seafarers working on various ships including tankers, bulk carriers, container ships, and passenger ships. The International Transport Workers’ Federation (ITF) estimated that there were 300,000–350,000 seafarers engaged in the cruise ship. In context with the developing countries which had the sea linkages had development of ports and related services which had a direct impact on the development and employment of the country. Developing countries like India, Srilanka, Pakistan and Bangladesh accounted for 90% of ship wreckage business, with India which had Alang in Gujarat as the biggest shipbreaking yard of the world, generating employment for lakhs of people (Sahu, 2014). India is the fifth largest supplier of officers after China, Philippines, Russia and Ukraine (BIMCO, 2015). The number of Indian seafarers employed on Indian and foreign-flagged ships had crossed 150,000 for the first time, with 37,259 of them getting jobs in the last three years alone, according to India’s maritime administration, the Directorate General of Shipping (DGS). Further lot of initiatives were taken by the Indian government to increase its maritime activity; One of the initiatives taken was through Sagarmala project to include 27 ports base industrial clusters, promotional of coastal shipping and development of inland water ways. Also, the government had announced 14 coastal employment zones (CEZ) that had to be aligned to ports maritime states (Sagarmala, n.d.). The report presented by (Ministry of Shipping, 2011) stated that was an urgent need to create a pool of maritime experts drawn from general administration, technical, legal and finance, suitably train them so that there was a continuous availability of marine experts to the Directorate General of Shipping without any break. Creation of Indian Maritime Service in line with other civil services of the nation was under consideration and therefore proposed to set up the Indian maritime services by 2020. These initiatives had a direct impact on the job opportunities in the maritime sector of India. Presently at the world level there is a huge demand of seafarers and mostly in the Officer cadre the following table from BIMCO 2015 highlighted the present gap and future requirement of officers in maritime industry.

Table 2- 1 Year-Wise Estimated Supply-Demand For Officers

Particulars	2015	2020	2025
Supply	774,000	789,500	805,000
Demand	790,500	881,500	952,500
Shortage	16500	92000	147,500

Particulars	2015	2020	2025
Percentage	2.10%	11.70%	18.30%

(Source: BIMCO, 2015)

The seafarers employed on ships worldwide increased from 108446 in 2013 to 154349 in 2017. India had always provided quality seafarers for national and international shipping and was recognized globally, as a reliable and important source of marine manpower. Indian seafarers, both officers and the rating were much sought after by the Maritime Nation of the World. India now provides 9.35% of the global seafarers and rank third in the list of the large seafarers supplying nation to the world maritime industry The last four years (2013 – 2017) saw an unprecedented growth of 42.3% ship board jobs for Indian Seafarers (Rameshkumar, 2020).

With an ever-increasing demand of goods and services across the globe and maritime trade being the most economical mode for transport of goods, it was bound have an ever-increasing employment opportunity in the sector. The contribution of India to the world seafarer fleet was consistently high and present high requirement at international level and growth trend seen in employment of Indian seafarer showed a further high employment opportunities for the country.

2.3 Education And Employment

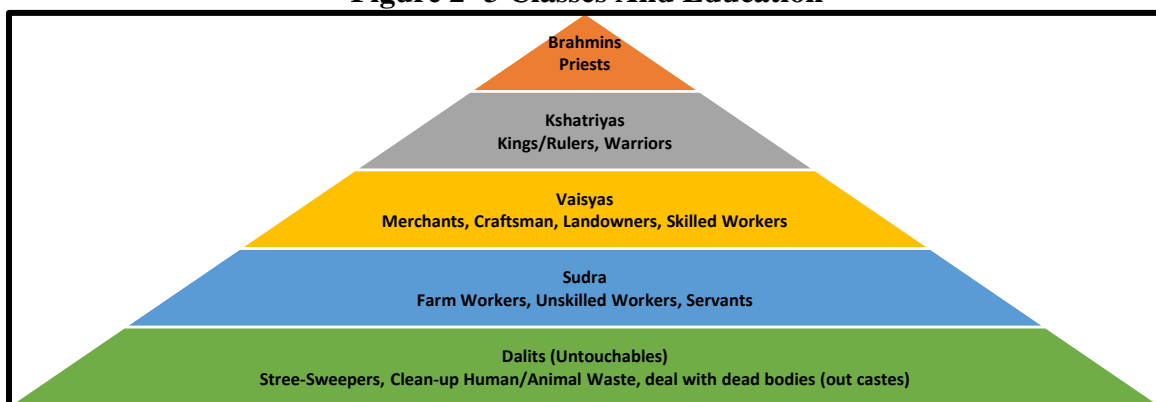
India's 1.3 billion people made it the second most populous country in the world, but with an average age of 29, it has one of the youngest populations globally. India has 15% of the world population. It is having GDP growth rate of 9% and the recent economic growth has encouraged the enthusiasm about the overall development of the country (Ministry of External Affairs, GOI, 2021). In all this, education played a very major role for the development or the growth of country and the progress of education was having the mixed success because still India do face certain issues in the education system such as social and gender gap but yet country do make major progress in raising literacy rates and also play an important role in world wide information technology. In comparison to past, it was noticed that there was a vast change in the education system and the value related to it but the history of Indian education had also made strong impact in the values of the people. The scenario had changed and the priority of people also had changed. So basically, this section focuses on the current education system in terms of their courses and what jobs have been provided related to those particular courses.

2.3.1 Indian Knowledge System

In past the education in India was handled under the supervision of “Guru”. The university of ancient Taxila was considered to be one of the earliest universities in the world. ‘Takshasila’ was the earliest recorded center of higher learning in India but it was debatable that whether it was regarded as a university or not in modern sense, because there was no proper allocation of lecture hall and residential quarters in Takshasila. (Needham, 2004). Also, the teachers living there had no proper membership of particular colleges. Later, ‘Nalanda’ university in eastern India was recognized as a university. Nalanda university was one of the oldest university systems in the world.

It was also reviewed that some secular institution had imparted teachings like Buddhist monasteries, Muslim ‘Madressa’ etc. which imparted education to their community only. The number of urban learning centers became increasingly visible from the period between 500 BCE to 400 CE and the important urban centers of learning were Nalanda. A large number of foreign students were attracted to ancient India to study topics such as Buddhist pali literature, logic, pali grammar etc. and among this Chanakya, a brahmin teacher was among the most famous teacher associated with founding of Mauryan empire (Keay, 2000). Some of gurus also provided education by means of donation. Brahmin gurus, didn’t charge any fees from the students or their guardians. Later, ‘stupas’, temple also become centers of education, in that era religious education was compulsory but also with that a secular subject were also taught. In ancient India, the Knowledge in India was imparted according to the class to which the individual belonged.

Figure 2- 3 Classes And Education



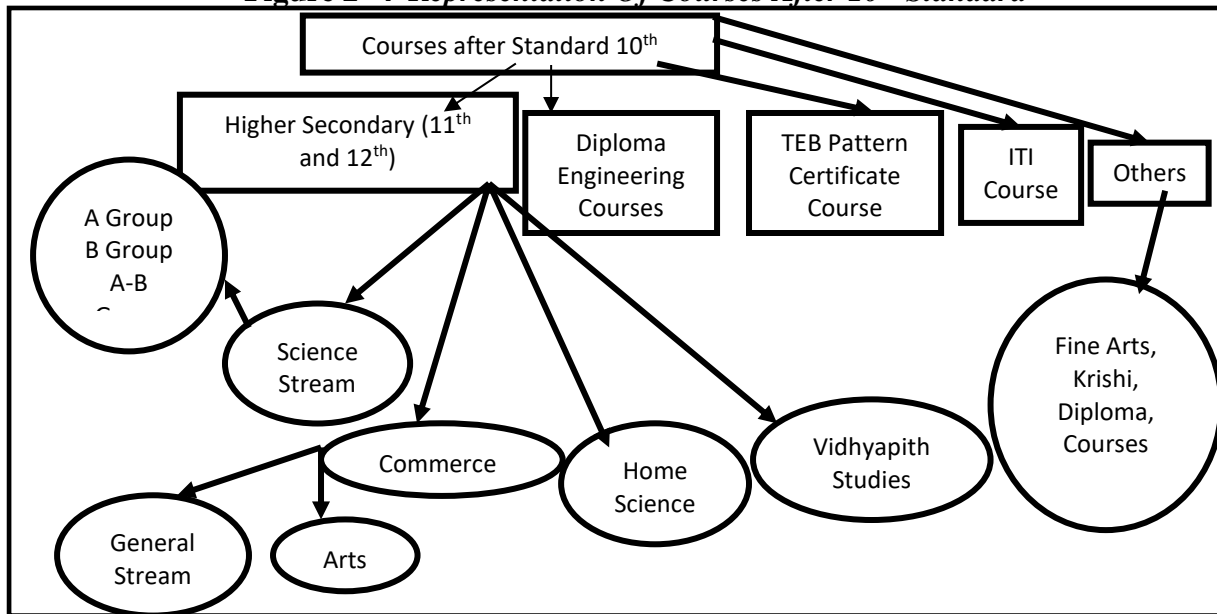
(Source: India A2Z, n.d. and Cultural Anthropology, n.d.)

The division of work in ancient India was caste-based. The ‘Brahmins’ were in teaching profession, i.e. they were ‘Gurus’. ‘Kshatriyas’ played the role of the warriors and protected the geographical territory of the kingdom. ‘Vasiyas’ were mainly entrepreneurs who were involved in the business. ‘Sudras’ worked as a labourers in farm and indigenous workshops. ‘Dalits’ were involved in the work of cleaning and sanitation. The ‘priest’ class, imparted knowledge of religion, philosophy and other ancillary branches while the ‘warrior’ class were trained in the various aspect of the warfare. The ‘business’ class were taught their trade and ‘working class’ and untouchables were deprived of education advantages.

2.3.2 Educational System In The Current Structure

Education till secondary level is a routine process. But the dilemma in education field comes twice for parents and students at two stages viz., at the inception of the schooling and after standard tenth. Tenth standard is the junction from where one has to catch the proper train of career to reach the appropriate destination. Various alternatives are available after standard tenth, which is represented in the Figure 2-4. It is very crucial for the student to choose appropriate course based on his/her interest area, capability, personal hard-working capacity, economic resources to fund the course and the most important is the availability of employment opportunity on completion of the course (Trivedi, 2013).

Figure 2- 4 Representation Of Courses After 10th Standard



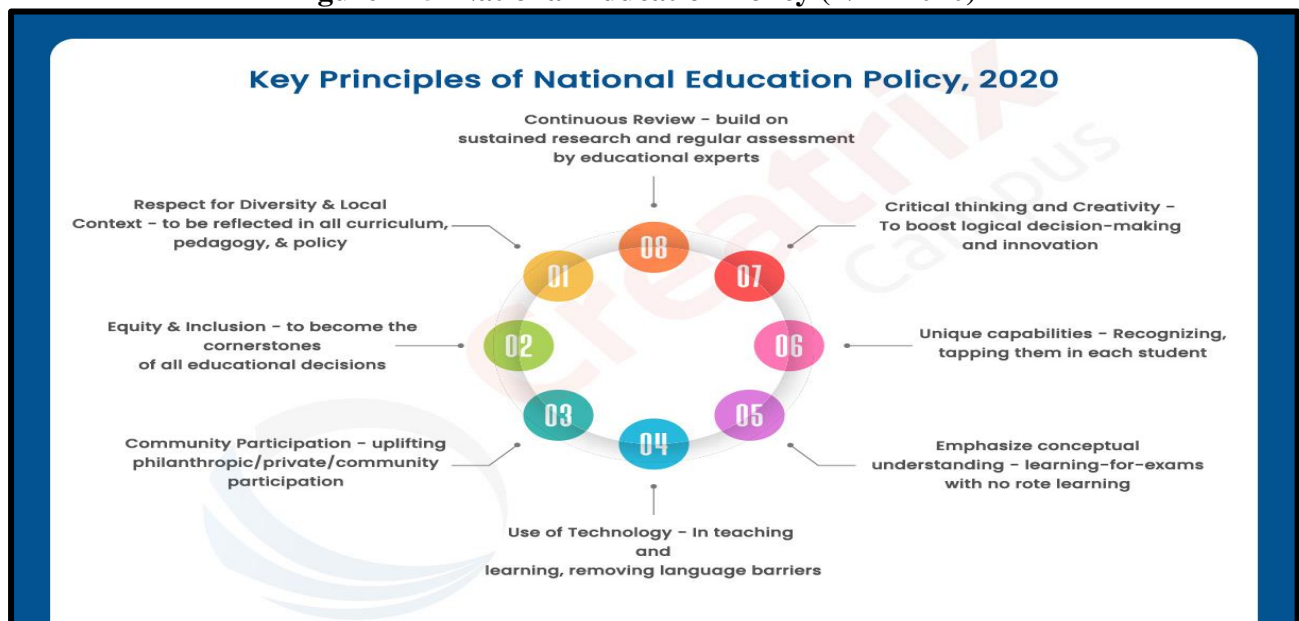
(Source: Authors' Compilation)

Under the present education system, the student has to choose either the Science, Commerce or Arts stream for attaining professional degree. Seldom students select a niche of either Home Science or Vidhyapith Studies. Diploma Engineering Courses are also selected by students. Those students who have high inclination for skills rather than the books and bags routine, often prefer to pursue different types of courses from Indian Training Institutes (ITI). Courses offered by Technical Examinations Board (TEB) also promotes value based, quality courses. Fine Arts, Krishi and various types of Diploma courses are also available for students to pursue a niche skill.

As the central government of India is expected to bring profound changes in the education system of India so the new education policy which is National Education Policy-2020 (NEP 2020) has been approved by cabinet of India on 29th July 2020, which provided the outline on the vision of India's new education system. The new policy replaces the 1986 National Policy on Education (Ministry of Human Resource Development , n.d.).

Basically, the new education policy is having aim to transform India's education system by 2021 by creating comprehensive framework for elementary education to higher education as well as vocational training in both urban and rural area. It has given more emphasis on the use of mother tongue or the local language as the means of interaction up till class 5 and it is also assumed to extent up to class 8. The NEP would revamp the entire education system. The emphasis of NEP is on learning for excellence and not monotonous learning.

Figure 2- 5 National Education Policy (NEP 2020)



(Source: Creatrix Campus, 2020)

The key principles of NEP 2020 is described in the Figure 2-5. It emphasizes diversity in education and inclusion of local context. It wishes to promote equity and inclusion, community participation and use of technology in teaching and learning as well as removing language barriers. The main emphasis is on conceptual learning rather than cramming the content. It also wishes to imbibe unique capabilities in each student, i.e. promoting skill development. The NEP wishes to encourage critical thinking and creativity for logical decision-making and innovation.

It also mentions that no language will be imposed on the students because as per the guideline and advisory of NEP the nature is up to the states, institutions, and the schools to decide on the implementation basically in India the education is concurrent list of subjects. The new policy has focused more on the elementary education to higher education as well as vocational training in both rural and urban India and the main aim is to transfer India education system by 2021. As per the new NEP2020, the 10+2 structure would be replaced with “5+3+3+4” model and it would be referred as 5 foundation years whether in an ‘Anganwadi’ preschool or ‘Balvatika’.

Performance Assessment, Review and Analysis of Knowledge for Holistic Development (PARAKH) would be established to improve the overall evaluation system and also to impart industry specific skills (Indian Education Systems, EduVoice, 2020). In new higher education policy, there is 4-year multi-disciplinary bachelor’s degree in which professional as well as vocational area will be implemented. In the vocational set-up, after completing 1 year of the study the certificate would be allotted to the pupil, post-two years diploma certificate would be allotted. Professional degree would be allotted after completion of 3-year program and post-four years a bachelor’s degree with the research, would be awarded (Kumar and Kapoor, 2021).

2.3.4 Job Roles In Maritime Sector.

There is an ocean of opportunity and requirement of qualified professionals from across all fields in maritime sector, below mentioned tables gives a glimpse of the job role and type of qualification required for the maritime sector.

Table 2- 2 Sea Based Jobs

Officers	
Deck Side	Job Role
Chief Officer	Responsible for the entire cargo operation in ports; loading, unloading.
Second Officer (Second Mate)	Keeping the ship, its crew and its cargo safe for eight hours each day.

Officers	
Deck Side	Job Role
Third Officer (Third Mate)	Maintenance of equipment, drill report, handling mooring stations.
Radio Officer	Communication equipment operation and maintenance.
Deck Cadet	Trainee navigation officer under Chief Officer.
Engine Side	Job Role
Chief Engineer	Overall, In charge of Engine room, Responsible for the engine side of Ship.
Second Engineer	In charge of all machinery and all the ratings in engine room.
Third Engineer	Daily maintenance and operation in the engine department.
Electro Technical Officer	Maintaining and supervising electrical and electronic equipment.
Engine Cadet	Trainee engineer officer performs all basic work in engine room.
Non-Officer Cadre	
Deck Side	Job Role
Boson	Head of the ratings division on deck.
Watch Keeper	Responsibility of safe and smooth navigation of the ship.
Able bodied Seaman (AB)	Experienced Seaman having merchant mariner's document.
Ordinary Seaman (OS)	Buffing, scaling, cleaning the deck.
Trainee OS	Under training does all the basic cleaning and scaling work at deck.
Engine Side	Job Role
Pump man/Motorman	Works on tankers carrying liquid cargo, ensures safe operation of pumps.
Electrician Rating	Electric fitting maintenance and servicing.
Fitter	Ensures continuous running of machinery and equipment.
Oiler/Wiper	Cleans machinery plant, checks systems and assists with engineering tasks.
Catering Department	Job Role
Chief Cook	Prepares meals and in charge of food stores.
Trainee Cook	Assist chief cook in preparation of meals.
Steward	Serving meals, keeps the living quarters clean.

(Source: Authors compilation)

Table 2- 3 Shore Based Jobs

Designation	Job Role
Port Officers	Managing all aspects related to Port business and operations.
Marine Administrator	Personnel and administration Marines.

Designation	Job Role
Port Operations Executive	Smooth execution of port and cargo operations.
Marine Engineer	Primarily responsible for designing the internal systems of the ship.
Marine Construction engineer	Marine Infrastructure and construction engineering experts.
Naval Architect	Planning and designing of ships and sea going vessels.
Radio Operators	Operator for telecommunication by means of radio waves.
Marine Biologists and scientists	Biological oceanography and the associated fields.
Marine Legislation (Lawyers)	Lawyers dealing with Marine related cases.
Marine Insurance Underwriter	Providing marine insurance to the necessary clients.
Fleet Manager	Utilize and manage all fleet and asset at optimum level.
Maritime Education	Professors and experts training in Maritime fields.
Ship Broker	Intermediaries between ship-owners and charterers.
Shipping Agent	Deals with transactions of a ship in every port that the ship visits.
Shipping Banker	Specialized financing services to maritime companies.

(Source: Authors compilation)

The above vivid roles and requirement in the sector, huge employed population, ever increasing manpower requirement and demand supply gap lead us to one important point regarding the reasons for such a gap and challenges involved in the seafarers' jobs.

2.3.5 Challenges In Jobs In Maritime Sector.

A typical sea related job involves long distance travels through sea routes, the voyage duration varies from a week to more than six months. During the course of voyage, the entire crew is limited to the ship and regular activity at ship. The isolation from rest of the world and crew interaction and movement restricted to ship for a considerable duration has a major impact on physical, psychological and social aspect of seafarer life (Hjarnoe & Leppin, 2013). The various factor that makes the jobs challenging and different from the other common jobs involves separation from spouse, kids, family, friends and rest of society for a long duration. Minimal or no interaction for days and weeks with family; not been able to resolve most of the issues of family due to long

voyages. Separation for such long duration is the biggest cause of stress amongst seafarers (Carotenuto *et al.*, 2012). Separation is not only affecting the seafarers but also the spouse at home (Oldenburg, 2019).

Disaster and high accident rates leading to the risk of life at sea possess a big challenge to seafarers, The accident rates are high in shipping industry in comparison to the rest of the industries in the world; between 2003–12, the fatal accident rate in shipping was 21 times that of the general British workforce, 4.7 times of that in the construction industry and 13 times of that in manufacturing (Roberts *et al.*, 2014).

Piracy contributes as one of the major challenges to the seafarers in last 10 years around 6000 plus seafarers have been held hostages by the pirates (International Maritime Bureau, 2016). The trauma caused to seafarers being hostages to the pirates and threat of life leads to long lasting distress (Seyle *et al.*, 2018).

Health of seafarers at sea is also a cause of concern, due to prolonged voyages at sea and lack of proper medical treatment on board, harsh and frequent change of climate from one region to another leads to various health related issues (Carotenuto *et al.*, 2012). Continuous vibration due to the ship engine and motion due to the harsh weather contribute further as stressors. The motion of the vessel can lead to a disorder known as the Sopyte syndrome: a symptom complex comprises of, drowsiness, apathy, disinterest, lethargy, lack of interest in work and participation in group activities, sleep disturbances (Hystad & Eid, 2016). Sea sickness directly affect the performance of seafarers and a major health hazard (Stevens & Parsons, 2002). Exposure of seafarers to various communicable diseases including sexually transmitted diseases are high, the risk of untimely actions due to diseases and injuries is considered as a major health risk (Grappasonni *et al.*, 2012). Seafarers faces various problems like disaster and high accident rates, piracy, high load of work-related stress, fatigue, isolation, multinational crew, environmental stressor on board, communicable diseases (International Maritime Organization, n.d.). Following table highlights the various challenges that a seafarer encounter during his work at sea.

Table 2- 4 Challenges Faced In Maritime Jobs

Physical Factors
Limited moving space as restricted to vessel
Different climatic condition as long voyages to different cities, countries change
Sea Sickness
exercise limitation as per the available equipment , space and time

Continuous noise and vibration due to vessel
Fatigue due to long working hours
Extended working hours due to unavoidable situations
Shift wise working, change in sleep cycle
Sleep deprivation
Social Factors
Long separation from spouse, kids, family and friends
Limited crew members with multinational identity
Unavailability to the family at the hour of need
Cutoff from society
Long duration of continuous onboard
Isolation
Challenges at Sea
High Accident rates
Piracy: hostages by pirates and associated trauma
Environment compliance related criminalization
Health
Depression
Sleep and eating disorders
Communicable Diseases

(Source: Authors compilation)

The above challenges are specific to seafarer’s job and contribute a large in the decision making to choose a career as a seafarer and also continuation for a prolonged period in the same profession. The retention of ship officers’ onboard vessels remains an important issue within the seafaring sector with a reported one in ten officers leaving the industry prematurely (Baltic and International Maritime Council ,BIMCO and International Shipping Federation, ISF, 2005).

2.3.6 Training Institutes In Maritime Sector

Education and training preferably at an early stage of a student’s academic life plays a crucial role to establish a successful and sustainable industry whose employees have the ability to take the edge off the challenges confronted in their work life (Terry & Stuart, 2010) (Thiruvassagam & Rengamani, 2015).

The primary input and the base for the seafaring career in order to excel in the maritime sector and to rise in the hierarchy of the ladder is attainable only through the education, training and knowledge related to the career in maritime sector. The maritime sector and the shipping industry primarily operates through skilled manpower that comes from various cultural backgrounds and

different countries (Bhattacharjee, 2021). The nature of maritime jobs has also evolved globally and demands skilled and technically sound workforce both for seafaring and shored based jobs. New job roles such as data analytics specialists has been created and existing job works are redesigned through training and development (Maritime and Port Authority of Singapore, 2017) (Corbett & Winebrake, 2008).

MacNeil and Ghosh (2017) brings out the fact that the earlier years of 20th century had visualized fundamental developments in training and education in few parts of the world for promotion of women in maritime sector which created a major shift in the women perception about the maritime jobs and that boosted women to choose male dominated career with enough grit and knowledge equipped to work in the chosen field.

Osterman & Martin, (2014) evaluated the educational system adopted by maritime institutes who conveniently follow the traditional methodologies which consequentially emphasize on training and course curriculum suitable majorly for men due to the technical expertise required for the job in nature.

(Pan & Rickard, 2018; Ku, Ye, Lee *et al.*, 2017) derived the fact during their survey that while in phase of selecting most preferred Maritime Education Training (MET) institutes the student considered several influential factors like personal choices based on interest level, credibility of institutes the academic standards, brand image in the market, societal views, international regulations and educational standards provided by the faculties who are highly expected to be competent and professional and who can explain the practical scenarios of maritime jobs preferably through their real life experiences.

(Brickman, 2014) apprises the fact for the country like US, that at world level, the shipping industry and governments have not made any concrete efforts to increase public graduates by way of designing special formal integrated courses into academics and to monitor its successful implementation.

(Cahoon & Haugstetter, 2008) elucidates that the shortage of seafarers is mostly found in traditional maritime countries like India, in spite of the fact that India provides large number of seafarers but they aren't much improvised and professional and as a result the shipping companies must relook into their approach towards choosing seafarers by way of providing basic job satisfaction benefits and following a practice of providing equal employment opportunities to both the genders in order to solve the recruitment and retention issues confronted by the Indian maritime sector. The

Directorate General Shipping (DGS) offers both pre-sea and post-sea training courses through its more than 140 approved maritime training educational institutes mostly catering into technical job roles.

Table 2- 5 Maritime Institutes Approved By DG Shipping In India

State	No. of Institutes	Intake
Maharashtra	50	16,498
Tamil Nadu	38	13,072
West Bengal	14	4,147
Kerala	7	2,122
New Delhi	6	3,527
Goa	5	992
UP	5	2,065
Gujarat	3	286
Andhra Pradesh	3	388
Haryana	3	1,255
Uttarakhand	2	292
Bihar	2	384
Orissa	2	500
Karnataka	1	248
Andaman & Nicobar	1	246
Telangana	1	136
Total	143	46,148

(Source: Directorate General of Shipping, n.d.)

Percy Chan, Executive Officer, in his interview with Maritime Singapore Connect provided insights on variety of courses that can be offered to the aspirants who prefer sea-based jobs and shore-based jobs as well as the interviews of female officers revealed that most of females opted shore-based jobs which in itself had several opportunities in the streams like maritime business, maritime law, commercial aspects like brokerage, chartering and financial aspects like accounting. (Lares, 2017) acknowledged that women need a little encouragement to choose legal profession into specialization in maritime law and also notifies that woman do serve as seafarers but the numbers can change with the evolution in promoting change in the views about the good job and bad jobs for women in the society.

(Columbia Group, 2017) found out that students who belonged to developing countries are more likely to choose maritime careers as it provides monetary affluence in comparison to other sectors.

(Ljung & Widell, 2014) analysed that there are seafarers who still continue to enjoy their jobs

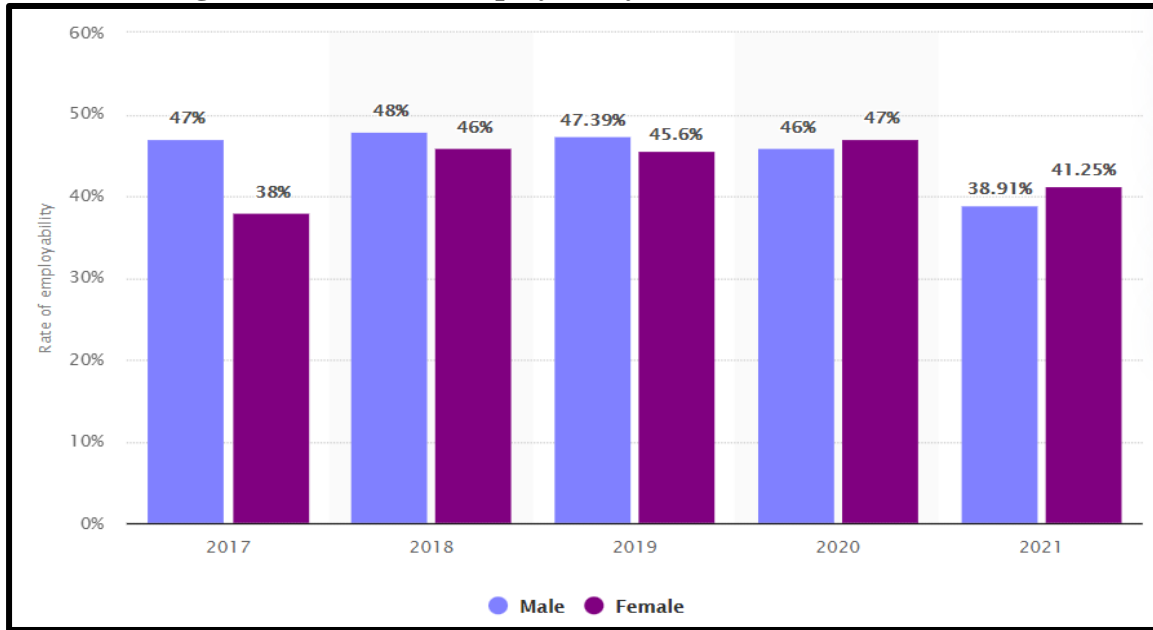
despite of unavoidable challenges for a reason to get motivation and satisfaction in terms of proclaiming their status quo image and exploring sea adventures apart from monetary gains. However, in recent years recruiters have experienced the lack of such attitude in current young generation to identify sea faring as a dynamic profession and so to an extent for a reason the shortages are visible in the shipping companies. (Dragomir, 2015) stated the recent changes recorded by educational institutions among well qualified women who choose academic profession after few years of their sea going jobs and contribute their practical knowledge by being lecturers and train students to follow the principles of tolerance, solidarity and respect for others while at sea. The author stated that due to low salaries at shore-based jobs as compared to their sailing jobs the shortages of lecturers in streams of maritime law, computer science, ship management is visible along with number of vacancies for subjects of nautical science and engineering also.

Researchers had derived those perceptions of under graduate and post graduate students discernible to maritime courses is varied and influential. The students belonging to different universities were mainly disinterested with the stereotypical theory-based subjects that provided minimal practical exposures. With the changing trends the suggestible topics that can instill knowledge as well as analytical skills to the students can be that of business and management, finance and law, environment operation management etc. Considering all the above factors and the present position of women in the maritime sector it is important to review the efforts done at worldwide level to address the issue of lower women participation in maritime sector

2.4 Women Employment

A drastic increase in women employment after the industrial revolution, has been witnessed. This also affected the GDP of a country in a positive way. Earlier, the reason for less involvement of women in workforce was lack of higher education. Earlier they were given low and poor status of job till the 19th and 20th centuries. Women's entry into universities for higher profession was very late. Even when they got entry, they used to get less payment than men for the same work. But in the 20th century many things got changed and women's participation in higher education increased which reflected the labor market. But they used to prefer women without children and men more than mothers (Shashikant, 2019). The rate of employability across India starting from 2017 to 2021 is discussed further.

Figure 2- 6 Rate Of Employability Across India From 2017 To 2021



(Source Basuroy, 2019).

The employability rate for men in India stood at 39 percent in 2021, which was a decrease by over seven percent compared to the previous year. On the other hand, the employability rate for women in the country leaped from 38 percent in 2017 to 41 percent in 2021. This marks a very positive growth for both the business sector as well as the social structures in the country (Basuroy, 2019). Country's growth is defined by how men and women attain education, what kind of opportunities they get in society and what kind of participation is there by men and women in the employment. So, when women start attaining higher education and start participating in the employment activities the country's growth and standard of living increases. James Wolfensohn of world bank states that when women get proper education that can increase productivity, increase economic growth and maintain higher standard of living. This can help society to take various decisions and ways to deal with several opportunities.

Women should work to earn, to improve their lifestyle, to learn new things, to become independent. Studies show that women who do not work often suffers from stress anxiety so to live a stress-free life a women should work. If a woman is working and successful, she will be the inspiration for their children and there are more chances that their children will also get success in their life. The biggest thing a working woman can have is the financial independence. A working woman can

bear her own expenses they don't need to ask money from their partners. Along with bearing her own expenses a working woman can give financial security to her family (Ahmad *et al.*, 2016).

2.4.1 Roles And Responsibilities Of Women

Within the society, women have important roles to perform. The roles of women are primarily recognized in the cultural, social, political, economic and religious spheres (Kapur, 2019). Whether woman is married or unmarried, working or not, they have to perform various roles. As there is increase in education level among women and employment opportunities for women their role in society have changed. In the earlier days women did not prefer work they were just meant for managing house and kids and they had no role in earning. But now the scenario has changed. Now woman prefer a lesser number of children and that too not instantly after marriage. Another thing is now every woman prefers education which increases opportunities for them (Wuench, 2021). And when a woman is literate, it will have great impact on her children also. Earlier only men used to do work for which one needs to go outside. But now a days, women's role have changed, as she has stepped out of house at workplace. Now more women like to work and they earn for their family. Women in male dominated sectors such as politics, is also visible. Nowadays women are also seen running business by themselves (Krishnan, 2020).

Due to change in women's role, the change in men's role is also visible. Whether it is workplace or families' women are now considered in taking decisions (Carpenter, 2018).

2.4.2 Professions Dominated By Women

There are many struggles faced by women earlier in our country. Today women is found in almost every job and there are several professions which are dominated by women (Tomorrow Makers, 2019). Based on the data of Department of Labor's Women's Bureau of US, the jobs in which women were involved were veterinarians, office supervisor, administrative support worker, doctor, respiratory/physical therapists, technicians, cardiovascular technologists, desk clerks, insurance underwriters, tutors, tax examiner, revenue agents, public relation specialists, fundraising managers, psychologists, education administrators, healthcare practitioners, telemarketers, residential advisor, physician assistant, waitress, laundry and dry-cleaning worker, customer service representative, sewers, tailors, dressmakers, translators, interpreters, cashiers, opticians, massage therapists, library workers, data entry keyers, flight attendants, event planners, librarians, travel agents, beautician, interior designer, housekeeping cleaners, maids, legal assistants,

cosmetologists, receptionists, childcare workers, preschool and kindergarten teachers, pilots, astronauts, astrologer etc (Stacker, n.d.).

As per the World Bank Group (2020) women account for only 19.9% of total labour force in India. Traditionally, women had worked as a nurse, teacher and was actively involved in the child-care. In the Indian context, 94 percent of women work in the unorganized sector which is even not counted in the Gross Domestic Product (GDP) of the country. It also lacks dignity of labour, security and even timely and decent payment of wages. As per the National Sample Survey Office (NSSO) data of 2011-2012, a majority of the Indian women work in agriculture sector, in the manufacturing sector they provide unpaid services in family businesses, or conduct home-based work at bear minimum wages. As a service provider women work either in the education related work or paid domestic household work. The survey highlighted that woman preferred to work in such sectors because it helped them to earn little along with their primary responsibility of proper homecare and childcare (Banerjee, 2019). The majority of the Indian women work in the low-skilled type of work. The female labour participation rate in India fell to 16.1% during the July-September 2020 quarter (Kumar, 2020).

2.4.3 Women Entrepreneurship

The world of equality, the world without gender discrimination and world with equal opportunity may create a balanced society with space and growth of every human being. Similarly removing gender-based barriers and promoting competition and entrepreneurial activities with a specific focus on women is essential for the creation of vibrant businesses and enterprises that could ultimately improve the plight of impoverished women (Bekele & Worku, 2008). Apart from the responsibility of the state and society, absence of a definite agenda of life, absence of balance between family and career obligations of women, poor degree of financial freedom for women, absence of direct ownership of the property to women, paradox of entrepreneurial skill & finance in economically rich and poor women, no awareness about capacities, low ability to bear risks, problems of work with male workers, negligence by financial institutions, lack of self-confidence, lack of professional education, mobility constraints and lack of interaction with successful entrepreneurs are major problems of women entrepreneurship development (Kumbhar, 2012). Conservative and rigid thought process is the biggest barrier in our country's development process for which emphasizing on educating women strata of population, spreading awareness and

consciousness amongst women to outshine in the enterprise field, making them realize their strengths, and important position in the society is necessary (Koneru, 2017).

The various factors that are helpful in the development of women entrepreneur revolves around the culture of society and support of immediate family members. Helpful spouse is a source of motivation for women entrepreneurs as positive moral support encourages them to face the world more boldly and further this phenomenon is strengthened if family and society also motivates and support them (Okyireh & Simpeh, 2017). The government sponsored development activities have benefited women in achievement of self-reliance and entrepreneurship skills majorly in rural and semi urban areas (Ahluwalia, 2018). There are several factors contributing to the emergence of women as entrepreneurs for which the sustained and coordinated effort from all dimensions would pave the way for the women moving into entrepreneurial activity. Motivational variables whether intrinsic or extrinsic (push or pull) are positively related to the challenges women entrepreneurs face (Moses & Amalu, 2010; and Agarwal *et al.*, 2018). Women entrepreneur networks are major sources of knowledge about women's entrepreneurship and they are increasingly recognized as a valuable tool for its development and promotion (Sharma *et al.*, 2012).

2.4.4 Microfinance And Women

A significant positive change in the economic variables in the areas of self-income, employment generation, asset building, productive investment, savings which led the socio-economic upliftment of rural women folk and empowered them particularly in the sphere of child education, leadership and entrepreneurship ability, technology adoption, decision making etc (Mula & Sarkar, 2013). There are various studies across several countries carried out related to microfinance and its impact on empowerment of women, the Asian countries ranging from India, Bangladesh, Srilanka, China, Thailand, Vietnam, Malaysia all have case studies and positive outcomes showing the impact of Microfinance in upliftment of Women, society and the complete ecosystem wherein the project have been successfully implemented. The studies in India have covered various successful model the microfinance model in Bellary Karnataka Year 2000- 2008 empowering women not only in terms of control over their incomes but also in terms of their status in household and community (Elahi, 2003). The various financial decision are definitely a positive outcome from the development through microfinance but important life cycle decision are also observed such as decision on children and their numbers (Nilakantan *et al.*, 2013). Further studies report positive

findings, measured through various indicators such as access to consumption, health care and contraception, improved decision-making power and better spatial mobility, access to property, and a decrease in domestic violence (Hashemi *et al.*, 1996) ; (Pitt & Khandker, 1996).

2.4.5 Work Life Balance Among Women

Studies on the topic are available in vast repository, various aspects on work life balance have been studied covering innumerable areas, job types, locations and groups. In the literature the primary focus has been women and majority Indian context has been focused. Over the last decade, Indian society has witnessed a surge in the participation of women in the workforce, the sudden surge in the involvement of women outside the home arena has led to additional work for women and the balance between both work and family life gained importance in order to justify both (Andukuri *et al.*, 2013). The women workforce carry an integral advantage across the life course, women are seen as being responsible for maintaining smooth, or preferably imperceptible, transitions between the worlds of home and work life (Emslie & Hunt, 2008). Traditional thinking states that men should only work and gain money and women should work as house hold, but the financial demands on the Indian families are increasing that's why women also should company in gaining income for families and so a fundamental change is required in attitudes of employees, family members and public (Mensah & Adjei, 2020). The acute talent shortage in specific industry like IT also leading to the entrance of women to cope with the current requirement (Valk & Srinivasan, 2011). Although the society over a period was witnessing majorily men working outside and women taking care of household chores, rearing of kids and taking care of elderlies by the change in role of women these household part did not receive additional workforce but the rearrangements of the priorities and redistribution of work. Accordingly, the industries employing both the male and female had to undergo lot of changes in last couple of decades especially in creating facilities and gender-neutral policies as well as concentrating on work life balance (Goswami, 2017).

The major changes observed and highlighted due to participation of women in workforce varied from one aspect to the other. Women employees are mentally occupied about the office work devoting more time in office which affects their domestic life (Ghausia & Osmany, 2020). Impact of women's employment mainly affects the education and care of the children, household work and participation in social and family gatherings. The working women need to make so many adjustments in order to maintain a smooth atmosphere and also to succeed in performing their dual

roles (American Psychological Association, 2020). The same leads to additional stress and pressure at both job and family front although another aspect that is visible in this decade is the home-based working women are the least stressed, most well-adjusted and most satisfied with their careers and their ways of perceiving and handling stress are found to be more effective. One of the classic examples of home-based working is Bidi industry. In the conventional method of working in an organization the employees experience a personal, professional, and monetary need to achieve, making work-life balance complex and challenging, whereas the home based working convenience offered by bidi industry assist majority of women workers to experience work-life balance by offering opportunities like flexible work schedules, reasonable time and commutation, and symbol of status for the family and individual (Hemanalini *et al.*, 2010)

The studies have reflected various aspects and one of them is the ability of women to cope with different kind of atmosphere and changes. Women with extraversion and openness to experience are independent, and sensible with reflective personality and had the ability to build strong networks that acted as their support system and thus helped them to maintain an efficient work life balance (Tandon & Chawla, 2018). In most of the culture women in India after marriage go to in-laws and stay there leaving parents into a completely different environment and set of personalities, the adjusting nature and adaptability is ingrained in the female attributes and thus a small support from industry, government and college can lead to them adjusting in any kind of environment (Lakshmi & Prasanth, 2018). A classic example of the same is during the world II the new emergency shipyards tended to be concentrated with 54.9 per cent were women from their non-existent role to majority of the women adapting themselves into male dominated industry in absolutely no time frame. Indian professional women expect to work at supportive work-places which would help them manage their multiple roles (Chawla & Sondhi, 2011).

2.4.6 Women In Maritime Sector

UNCTAD (2017) specifies that the men make up the majority of workforce in almost all the shipping trades. For the year 2015, in the entire global merchant fleet, there were only 16500 women seafarers (one percent) and 1,631,000 men seafarers out of estimated 1,647,500 seafarers (Tang *et al.*, 2018). As per the UNCTAD report shipping business is a highly male dominated sector both at on shore as well as off shore. There exists only one percent of women seafarers of total world seafarers working at global level and out of which the women working on shore hold 55% of global maritime junior level position and nine percent of executive level positions. The

overall sector has ninety eight percent of male employees and only two percent of women employees, the ratio is almost similar across the globe wherein the developing or underdeveloped countries have even less than one percent of female employed in the sector (Costanzi, 2019). Such a low figure demands an insight about peculiarities that are involved that restricts women joining the maritime sector.

2.4.6.1 Women At Sea

In the ancient time it was considered that the earth is flat and travelling by sea beyond a point shall lead to falling deep into space, the fear of unknown, sea storms, hurricanes, manually operated and wind operated ships, lack of basic amenities in ship, highly fatigue job , long voyages and numerous such factors kept women away from the sea based jobs, to certain extent the presence of women on ship was considered evil till 18th century (Creighton & Norling, 1996). Cross (2002) has done wide research on the root causes of male dominance in the maritime history wherein he finds out several literary evidences way back in 15th and 16th Centuries where sea faring was perceived to be an activity basically done by voyagers who were only men as it involved physical prowess, endurance, natural sea dangers and risks while the said belief loosened its importance in the early years of 17th and 18th centuries when women pirates were found to exhibit similar traits as shown by men at sea. During 17th and 18th century also Fisher (2006) narrated the history of Indian maritime female labourers who were employed by British officers and sailors in the early times of 18th and 19th century when they struggled and survived through tough time of injustice shown by the British Crew who gave poor access to amenities while at sea at the cost of several lives on board.

Ståhl & Hermansson (2018) studied extensively some extraordinary personality traits of the women of 19th century and found that women were actively associated with the shipping sector by being dominant over men in matters of dealing with financials and investment strategies as it states that they were equipped with quintessential qualities of business acumen, forecasting financial growth in relation to their maritime business.

According to Abreu-Ferreira (2000) the historical data noted revelations of Portuguese women who showcased as active representatives in promoting, handling and managing the shipping business, while their men would be at sea busy catching fish for business continuation and in consequence, they took an opportunity to build a dignified image due to their dual roles performed efficiently at business and at home. Unlike, the present societal perception, women of those times were

independent and had authority to take major decision at multiple levels in contrast to patriarchal family culture. Tastsoglou & Miedema, (2003) derived that the emergence of women was visualized in early 18th and 19th centuries in Canadian histories to face the phase of racial discrimination and served their society by spearheading several programmes and activities that were aimed to contribute their communities at political, social, religious, cultural and educational front. Eventually Miedema also highlighted those women also who underwent strife with such women contributors and paved their own way for establishing their separate business entities and lived an independent life. The historiography on women working in maritime sector revealed their cross-cultural backgrounds and their sexuality traits. The past data enlisted variety of jobs taken up by women at sea as that of disguised cross-dressed cabin boys, chandlers, laundresses, moneylenders, sex industry workers, boarding-house keepers, ship owners, marine store dealers, sailmakers, seamstresses, nurses etc. which in hitherto had enabled the seafaring nation's prolonged activities (Cordingly, 2001).

The past histories also revealed that women have also taken up such jobs where male physical prowess was conditional such as crane operators, welders, riveters, fitters and joiners including challenging roles of leadership through participative leadership techniques (MacNeil & Ghosh, 2017). Hall (2015) investigated on the comprehensive roles accomplished by the women with great endurance in the field of technical and non-technical aspects such as that of merchant navy, winning over shipping business deals, warehouse navigation, patenting nuclear equipment and had gained prowess in promoting business tactics all of which had proven to be contradictory to the contemporary writers' findings on less involvement of females into sea related occupations.

During World War II it was observed that the role of women in the shipping sector spurred with the increasing demand of labour for ship building activities, the women had even taken up the jobs that were considered male oriented and were successful in breaking the gender barrier (Hirshfield, 1989).

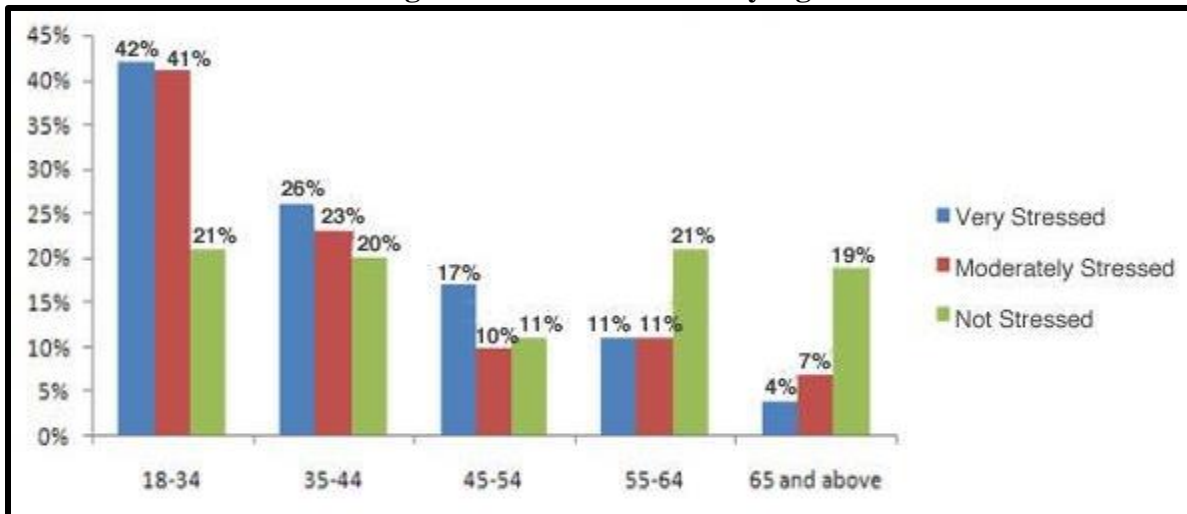
Ljung and Widell, (2014) surveyed that the core challenges prevailing amidst the sea ferrying community were mainly pertaining to health and life imbalances, gaps in career path due to child bearing, staying apart from family and society, on board sea challenges, stringent laws and lack of sore based jobs together lead to demotivate the officers to continue with their profession despite of lucrative gains. Ljung and Widell (2014) also pointed that the women seafarers continued to endure the sea challenges on gender perspective and due to the organizational culture and its dichotomy

that restricted them, from proving them they are equal to man at different levels. It became rather important to know with above the specific challenges to women as a seafarer were not applicable to the men onboard.

2.5 Job Stress Faced By Women

Women in India have made amazing progress after freedom. From simply being a homemaker, women today have gained abilities and capacities of being a homemaker as well as being at standard with their male co-workers. More issues emerge with the working mother as she needs to satisfy the obligations at the workplace as well as home (Shiva, 2013). A global survey found that while women achieve the same results as men at work, they experience "unreasonable" stress in more occupations than males, according to another study performed in Bangalore. Equal pay, equal opportunities, career advancement, and fair performance evaluation are just a few of the major challenges that have put working women under undue stress (Tripathi and Bhattacharjee, 2012). Various circumstances or life occasions can cause pressure (Gupta, 2021). The physiological and mental reactions to circumstances or occasions that upset the balance of a living being comprise pressure which creates stress (Tripathi and Bhattacharjee, 2012). Indian Women have proved their determination in the work domain. Apart from changing roles and responsibilities of working women, it was found that they have maintained the traditional work character of their families too (Tripathi and Bhattacharjee, 2012). If women were given less job autonomy or experienced close monitoring or hazardous work pressure then they felt the job stress (Lu, 2005). The occupational stress faced by women working in India are mental stress because they are not treated capable and efficient when compared to men. Sexual harassment as the majority of the women work in the unorganized sector and at lower cadre. Work-place discrimination, as they are deprived of promotions and growth opportunities. Lack of family support, insufficient maternity leaves, job insecurity are also responsible for the occupational or job stress. Workplace culture, office gossips, office politics are also stress-booster reasons for working women. Demographic reasons such as age, education, marital status, number of children and income also affect the stress-level among the working women in India (Barati *et al.*, 2016). The intensity of stress and problems differed across different categories such as married, single, divorces, single parent woman. The commonality in problems faced by the working women were mental stress, physical stress, lack of balance between family care and work, workplace discrimination and unfair treatment at workplace (Kumari, 2014). The stress level by age is depicted in the Figure 2-7, which is explained further.

Figure 2- 7 Stress Levels By Age



(Source: Polaris Marketing Research,2021)

Women aged between 18-34, who are probably going to shuffle numerous jobs including mother, career for old guardians, homemaker and in some cases provider - experience essentially higher pressure than men, as indicated by most recent Health and Safety Executive (HSE) measurements. Women experience more stress than males. In a survey conducted by the American Psychological Association (2020), in the previous five years-49 percent of female respondents reported their stress levels had increased, whereas only 39 percent of male respondents said their stress levels had increased. According to another Polaris Marketing Research survey, women are most anxious about their finances, relationships, and capacity to successfully manage their time, whilst males are most stressed about their job. Young people are more anxious than any other generation (Giang, 2012).

2.5.1 Theories On Stress

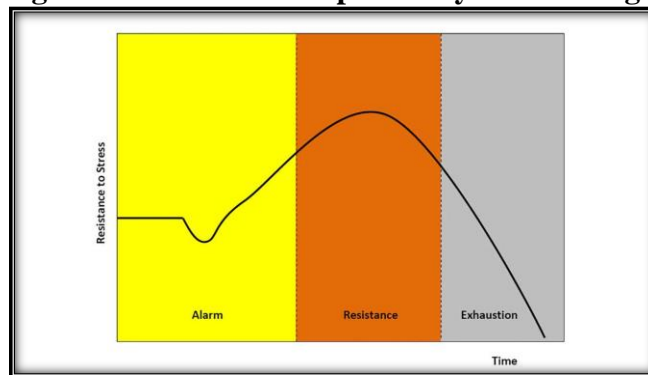
Stress is extremely normal. Stress is one of the most intriguing issues. It encompasses not just what happens to the body during a stressful situation, but also what happens to an individual's mind. Stress can create mental exhaustion, irritation, and sleeplessness. The following are some theories about stress and work-life balance.

Systemic Stress: Selye's Theory

The endocrinologist Hans Selye's work is primarily responsible for the prominence of the stress idea in science and the media. He discovered in a series of animal investigations that a range of stimulus events (e.g., heat, cold, poisonous substances) administered strongly and long enough

might produce common effects, meaning effects that are not particular to either stimulus event. These non-specifically produced modifications, according to Selye, make up the stereotyped, i.e., particular, response pattern of systemic stress. "A state represented by a syndrome that includes of all the non-specifically generated abnormalities in a biologic system, (Selye,1976). The 'General Adaptation Syndrome' (GAS), a stereotyped reaction pattern, is divided into three phases. The three-stage GAS process summarizes the physiological changes that occur in the body when it is stressed. The GAS theory was proposed by Hans Selye, a medical doctor and a researcher. He saw a sequence of physiological changes in lab rats after they were subjected to stressful situations during an experiment at McGill University in Montreal. Selye found after more investigation that these alterations were not an outlier, but rather a common stress reaction. Alarm, resistance, and fatigue were the stages recognized by Selye. Understanding these many reactions and how they interact may assist you in coping with stress (Selye, 1976).

Figure 2- 8 General adaptation syndrome stages



(Source: Selye, 1976)

Alarm Reaction Stage

The alarm reaction stage describes the first signs and symptoms that the body exhibits when it is stressed. The "fight-or-flight" reaction, which is a physiological response to stress, may be known to a person. In harmful situations, this natural reaction prepares one to run or defend oneself.

Resistance Stage

The body begins to mend itself after the first shock of a stressful incident and the fight-or-flight reaction. It produces less cortisol, which causes heart rate and blood pressure to return to normal. Even while the body is recovering, it is still on high alert for a time. Some stressful circumstances might last for months or even years. If one does not deal with the stress and keeps the body on high

alert, it will gradually adapt and learn to live with a greater degree of stress. In order to cope with stress, the body undergoes changes that one are unaware of.

Exhaustion Stage

This stage is caused by long-term or chronic stress. Long-term stress may deplete the physical, emotional, and mental resources to the point that the body no longer has the power to combat it. One becomes ready to quit up or believe that the situation is hopeless.

Psychological Stress: The Lazarus Theory

Any psychological stress theory must include two concepts: appraisal and coping. Appraisal refers to an individual's assessment of the relevance of what is happening for their well-being. Coping refers to an individual's attempts in thought and behavior to handle specific demands (Lazarus, 1993). The Lazarus stress theory has undergone numerous important adjustments since its original presentation as a comprehensive theory (Lazarus and Folkman 1984; Lazarus and Launier 1978). Stress is treated as a relational notion in the most recent form (Lazarus 1991), i.e., it is not defined as a specific type of external stimulus or a certain pattern of physiological, behavioral, or subjective reactions.

The idea of appraisal, which was first brought into emotion research by Arnold, 1960 and later developed with relation to stress processes by Lazarus, is a crucial aspect in comprehending stress-related transactions. This notion based on the assumption that emotional processes (including such as stress) are influenced by people's genuine expectations about the significance and result of a particular encounter. Individual variances in the quality, strength, and duration of an evoked emotion in situations that are objectively equal for various persons need this idea. A precise pattern of assessments is thought to be responsible for generating, maintaining, and finally altering the ensuing condition.

Resource Theory Of Stress

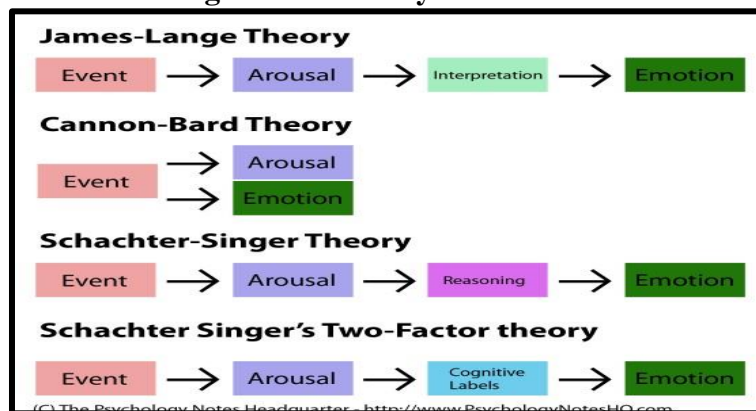
Unlike the methods covered so far, resource theories of stress are primarily concerned with resources that maintain well-being in the midst of stressful encounters, rather than elements that cause stress. Social support (Schwarzer & Leppin, 1991), feeling of coherence (McCubbin, *et al.*, 1998), hardiness (Kobasa, 1979), self-efficacy (Bandura, 1977), and optimism are some of the social and personal categories that have been presented (Scheier & Carver, 1992). Hardiness and feeling of coherence are three-part methods, whereas self-efficacy and optimism are single protective variables. Internal control, dedication, and a sense of challenge rather than threat are the

three components of hardiness. Similarly, having a sense of coherence entails thinking that the universe is meaningful, predictable, and fundamentally good. Several forms of social support including instrumental, informational, appraisal, and emotional assistance plays a vital role in stress.

James-Lange: Theory Of Emotion

Although theorists William James and Carl Lange proposed their respective theories on the correlation of stress and emotion in 1884 and 1885, they shared a common understanding of the relationship: emotions do not emerge immediately after the perception of the stressor or stressful event; they emerge after the body's response to the stress. According to the hypothesis, when a person's autonomic nervous system (ANS) is stimulated (arousal), it responds by producing physiological signs such as a quicker heartbeat, greater sweat and higher muscle tension (Sincero, 2012). The theory of Emotion is described in Figure 2-9.

Figure 2- 9 Theory Of Emotion



(Source: Sincero, 2012)

The brain will interpret these reactions after the physical events have occurred. An emotion emerges as a result of the brain's analysis. The hypothesis is analogous to the "fight-or-flight" response, in which body sensations prepare a person to react depending on the brain's interpretation of the situation and physiological events (Sincero, 2012).

Cannon-Bard: The Emergency Theory

This view is entirely opposed to James and Lange's. Emotion in reaction to stress, according to theorist Walter Cannon, it can arise even if no physical changes are evident. According to Cannon, the brain recognizes the visceral or internal physiologic reaction of the body more slowly than the function of releasing emotional responses. He sought to verify his idea by constructing

"decorticated cats," in which the neural connections of the body are segregated from the cortex of the cat's brain. When confronted with a stressful situation, the decorticated cats displayed emotional behavior that included hostility and fury. This feeling was then shown by body modifications such as clenching teeth, snarling, and standing up straight (Sincero, 2012).

The Schachter-Singer Theory

In order to feel an emotion, theorists Stanley Schachter and Jerome Singer claimed that proper emotion identification necessitates both cognitive effort and emotional arousal. Schachter and Singer also suggest attribution, or the method by which the brain can recognize the stress input that causes an emotion. According to the hypothesis, we become aware of the cause for our emotional response, and if the explanation is not evident, we begin to hunt for external cues to help us interpret the feeling correctly.

2.5.2 Theories On Discrimination Of Women In Jobs

There are various theories that describe discrimination of women in jobs. The Patriarchal-Capitalist Theory explained that gender discrimination lead to economic disparities, lower social exposure, low decision-making power, oppression and complete male dependency (Eisenstein, 1977). The Conflict Theory justified the antagonism against the sexes prevailing due to the social, economic and political belief systems based on the societal experiences of the men (Berkeley and Thomas-Mason, 2015). The Attribution Theory described the objective factors variable subjective factors as a measurement tool to review the performance wherein the women were subjected to more scrutiny against their male counterpart (Gedeon and Rubin, 1999). The Glass Ceiling Theory explained the bias towards female employees due to which they were denied higher managerial position (Pillai *et al.*, 2011). The Feminist Theory studied is found to be the most comprehensive and exhaustive theory. It incorporated variables such as gender inequality (O'Connor, 2019), discrimination against women at workplace (Trentham and Larwood, 1998), sexual objectification (Miller, 1997), oppression (Lloyd, 2007), patriarchy (Sultana, 2010), the problem of accepting the competent personality of the opposite gender and stereotyping (Bligh, 2012) to study the discrimination of women at the workplace.

2.6 Opportunities And Challenges Faced By Women In Maritime Sector

Minority across all parts of the sector, the recruitment of women in both junior and senior roles within shipping companies is on the rise, with maritime organizations increasingly promoting the

benefits of a gender-balanced workforce. There are several challenges that a woman faces in the maritime sector along with the opportunities too rising these days. Development, new advances and technology in the maritime sector are furnishing with a magnificent chance to do a job in that sector, as they set out new jobs and open doors. Customary jobs in sea ordinarily have specific prerequisites that can prohibit ladies – one such necessity is marine experience. But now there is just a tiny level of female sailors. Digitalization and cleantech arrangements, for instance, make the way for individuals with various arrangements of abilities and this is opening up the possibility of making a more assorted industry (Berti, 2019).

2.6.1 Challenges To The Women In Maritime Sector.

The age-old perception of seafarers as masculine, tough, risking lives, fighting pirates and confronting harsh weather always creates an impression of males doing the sea jobs. Before the mechanical and technological advancement, the physical prowess was an important aspect to be hired for maritime based jobs but in the present world the physical labor has been taken away by machines and there is no typical work that requires hard labor. Still as per the age-old practices and perception masculinity is considered as integral part of job (Acejo, 2016).

Similarly in context with the perception about women doing typical jobs; women going for long voyages away from family, kids in a male dominated world is hard for society to accept. The same possess innumerable challenges to the women seafarer like marriage problem, continuation of job after marriage and kids, high divorce rate etc (Cahoon & Haugstetter, 2008).

The onboard challenges that typically only a women seafarer faces ranging from lack of basic facilities at ship for women, sexual harassment, stereotyping, isolation due to lack of women on board (Costanzi, 2019). Bullying and non-acceptance by the male colleagues is observed and is a matter of concern for a newly inducted women seafarer (Dragomir & Surugiu, 2013).

Theotakas and Tsalichi (2013) describes the male perspicacity towards the female ship officers onboard and cites the need to make augmented efforts from the entire shipping fraternity, its associations and stakeholders with regards to men's approach along with other factors and challenges confronted by women maritime workforce especially the seafarers on issues like loneliness, isolation, low participation in labour unions, maternity and reproductive health issues, harassment and bullying, lack of positive career options, late marriages, failed marriages, improper growth of their children, side-line the friends and family while leading work-led life etc. To determine the women's presence at sea and as a result women strive to live a work-led life rather

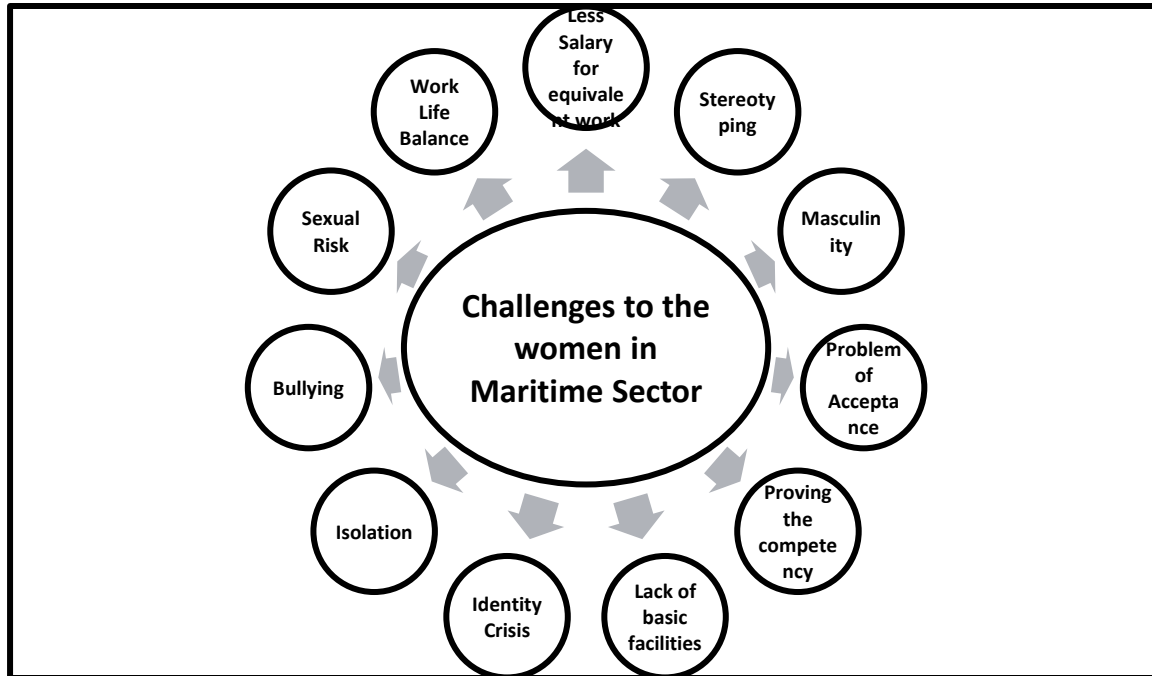
than which is work-life balanced as there seems a lack of research for the same in context to imbalance in their social lives.

Kitada (2010) highlighted the other common challenges faced by the women crew on board apart from the above citations like identity crisis and the ways in which they cope with identity management both at sea and ashore and cites that there exists a male driven occupational culture of seafaring for many years which includes several aspects of life on a ship. Amongst the various factors that are observed payment of lesser salary to the women seafarers in comparison to their male counterpart for the similar job and roles is common in maritime employment (Thomas *et al.*, 2003).

Further the avenue of promotions at the senior level are non transparent in nature and it is observed that the women officers are not considered for promotion inspite of their seniority and experience with respect to their male colleague officers (International Labour Organization, 2003, p.10). The acceptability of women in the maritime sector is still very low the total female employment of less than two percent highlights the gravity of matter, the challenges starts right from choosing the career in maritime sector and joining the training institute wherein the basic training module, infrastructure and course content is male oriented (Dragomir, 2015). The professors and subject matter industry experts conducting session are gender conscious and with the increase of women trainees are not able to transform their methodology (Bondestam, 2004, p.152).

Inspite of women trainees scoring very high in training with good ratings the recruiter are biased towards male trainees and avoids hiring female cadets onboard (Basnayake, 2008). Once shortlisted for the job the acceptability by the crew at ship possess further challenge it has been observed that a women seafarer has to prove her competency in order to be accepted by the crew members a very rare in case of male seafarers (Tangi, 2016; Turnbull, 2013). The challenges faced by the women are depicted in the Figure 2-10. The challenges mainly include pay discrimination, stereotyping, masculinity, problem of acceptance, problem of competency, identity crisis, isolation, workplace bullying, work-life balance, lack of basic facilities, sexual harassment, etc. Such challenges often created a hurdle for women seafarers to continue her job in the smooth manner. At times it acted as a hindrance to climb the career ladder. Such challenges were experienced by women in common irrespective of the country she belonged to. Thus, it may be termed as universal challenges faced by the women.

Figure 2- 10 Challenges To The Women In Maritime Sector



(Source: Authors Compilation)

The worldwide maritime community is presumably the most culturally assorted industry. But it lingers behind numerous different trades, in the quantum of women at high-level positions and in the fusion of females into sea-based jobs. Women, unreasonably face difficulties towards employment, which is maritime-based. They experience various challenges which are cultural, financial, legal, societal and familial in nature (Laursen, 2015).

One such challenge is Stereotyping. Stereotypes are presumptions made with regard to a group and are applied to people belonging to such group, independent of their own attributes, in light of their connection with a specific group. The stereotypes can be positive, negative or impartial. Both positive and negative stereotypes can be destructive (Davis and James,2015). There has been a long story of gender stereotypes in the maritime sector, women had to fight for their right to education and employment. Gender non-discrimination has slowly turned into a distinctive subject in the field of sociology. However, for the mariners in the oceanic business, society has long held assumptions viewing gender stereotype as well as various cultural assumptions for different genders (Ku, *et al.*, 2017). Most sailors are stereotypes and hold a typical conviction that females have no business on board transport. It is exclusively their reality and they are the main rulers of marine industry (Mukherjee,2021). Addressing just a small portion of the marine trade which has commonly male-

overwhelmed labour force, females are pushing for equality and change to break this stereotype (Berti,2019; MacNeil and Ghosh, 2016).

Since a very long time, the maritime sector has been a perceived spot, ruled exclusively by men, and despite the fact that there were females included, they were for the most part on the peripheries. Due to masculinity, in the maritime transportation sector, there has been an enormous orientation hole, taking into account that females are assessed to address just 2% of the complete number of seafarers across the globe. As the environment experienced on board is strictly male dominated, women at sea may feel left out or ignored. While there has been a genuine demand of seafarers on the delivery market, female seafarers prove undiscovered asset for the employment needs (Dragomir, Camelia and Popa, 2018; Guo, Liang and Ye, 2007). The greatest challenge for females in this field has been battling insights that such positions are implied uniquely for men and require a range of abilities more connected with them. Numerous females dread to enter the male dominated sector as they accept that they could confront physical harassments and brutality or extreme boisterous abuse as well as low degrees of help and support from male co-workers (Mukherjee, 2021). Being acknowledged in the whole gathering of men and considering a female as one of them may regularly appear to be time taking and difficult. Inappropriate behaviour by the male counterparts on board is one of the most difficult challenges for a female seafarer. The problem of acceptance by the fellow male co-workers restricts the women seafarer to a larger extent to enter this sector (Bhookhun and Kitada, 2017). Females are subjected to prove that they are competent to perform the task of a seafarer although the colleague male seafarers are not (Tangi, 2018). Adrift, the primary issue for the females is to substantiate themselves technically and physically to enable themselves win the admiration of their male colleagues. As such the females are seen as working harder than their male partners to enable them to make the mark, as the males are only found at the decision-making level. Females are left with no option, but to prove that they are equally competent than their male counterparts (Stanley,2000).

On the other hand, the basic facilities required by a female seafarer like access to sanitary bin, independent space to sleep in case of being single women are observed to be lacking on board. Unavailability of basic sanitation facility for female seafarer, proved to be crookedly troublesome, making it a critical obstacle to work in marine sector. For females, menstruation can mean an end to their marine career simply because their work place lacks basic female hygiene and sanitation

resources (Caesar, Cahoon, and Fei, 2014). The other challenge faced by women on board is identity management due to very low number of women on board. The strategy adopted to overcome this challenge is hiding the feminine traits and physical appearance. Manly standards and values are so prevailing in the marine culture that even an unpretentious indication of womanliness can be taken as a mark of difference at sea. Female seafarers normally felt awkward when they were seen as ‘women’ rather than a seafarer by their male contemporaries on board. Therefore, female seafarers attempted to pretext less feminine in their appearance and behaviour (Walker, Peart and Gleaves, 2003).

Sexual Harassment is one of the events very often reported in the workplaces, especially in the male dominated professions. The ships are the case book examples of the male dominated workrooms and it is recurrently experienced by the female seafarers, as the relevant studies suggest (Blecher et al., 2003, Thomas, 2006). Female seafarers on board are exposed to sexual risk and harassment. Unwanted sexual advancements, sexual requests, derogatory comments, blocking normal movement etc are few of problems faced by female seafarers. Also, sexual harassment is by and large characterized as undesirable sexual consideration that implicitly or explicitly makes a female seafarer scaring, threatening or hostile in the working environment on board (Kitada,2015); (Thomas, Bloor and Little, 2013).

Bullying is also a very common challenge faced by the women seafarer. Bullying is defined as “a form of harassment that includes hostile or vindictive behaviour that can cause the recipient to feel frightened or intimidated (International Chamber of Shipping and International Transport Workers Federation, 2016). Females are more vulnerable to bullying because of the belief of some male seafarers that females are “the weaker sex” and therefore have no place in the profession. Bullying also takes place when some male seafarer feel vulnerable when they observe junior women officers who are working hard (Tangi, 2018). Isolation, on the other hand, is another challenge for a women seafarer. Many women do not choose shipping as a vocation owing to the elongated stay at the sea. Staying far from friends, family and relatives for a long time is very difficult for a woman, leading to the feeling of Isolation (Humlum, Kleinjans and Nielsen, 2012). Finding a balance between demands of work and family has been a common issue. Some of the quirks which are not acceptable by societal norms are balancing work and home due to typical nature of seafaring job, long voyages, lack of communication with family, traditional social responsibility of marriage, nurturing family,

kids with females and long absence from home are some of the major challenges faced by the female seafarer (Jensen, Bergqvist, Hjelle and Lekakou, 2015).

The small percentage of the women seafarers compared to the corresponding one of their male colleagues makes clear that access to employment onboard is not an easy task, especially with regard to the ship officer rank. There exists reservation in recruiting women seafarer by the companies. The struggle to be employed onboard diverges between countries, but then the presence of blockades is a matter of fact. Frequently it has been reported that female cadets or female seafarers face complications while applying for the employment or are discriminated on the contrary owing to their gender at the selection phase (Theotokas, 2011). The scrutiny of experiences of the cadets, both males and females, demonstrates the fact that female cadets had to negotiate for their position as a female in the male dominated atmosphere and had to manage their admission as apprentices into the environment. The women engineering cadets confronted that they had to face even more challenges while trying to prove their professional capabilities (Gould, 2010). Lesser salary is being offered and paid to women employees at sea than their male counterparts for the similar job. The root cause of such behaviour deceits in the prevailing masculinity edifice, which, as research in other context proposes, is favoured by the structure and the practices at the training school (Walker et al., 2003). Also, most of the private shipping companies provide contractual employment and do not have remarkable training and retirement benefits for the females. The Training Centre are designed typically suiting the male seafarer in the terms of infrastructure, training modules etc. This is a matter of concern for the female seafarers who look for job stability, growth, learning and various retirement benefits like pension. This is also a reason as to why women hesitate to join this industry (Stahl and Hermanson, 2018).

The Feminist Theory studied is found to be the most comprehensive and exhaustive theory. It incorporated variables such as gender inequality (O'Connor *et al.*, 2019), discrimination against women at workplace (Trentham and Larwood, 1998), sexual objectification (Wallace, Lings and Cameron, 2012), the problem of accepting the competent personality of the opposite gender (Zinkin, 2018) and stereotyping (Ferguson, 2017) to study the discrimination of women at the workplace. Having an understanding of above it is important to know that with the existing challenges the available opportunities with women in maritime sector and future of maritime employment from the gender perspective.

2.6.2 Opportunities For Women In Maritime Sector

Suitability to a maritime career has more to do with individual's abilities than with gender or nationality. A very good example is Mrs. Captain Radhika Menon, seafarer woman, Master of the oil tanker Sampurna Swarajya, who received the IMO Award for Exceptional Bravery at Sea in the year 2016 by the IMO Council. She proved determination and courage in leading the difficult rescue operation of seven fishermen from a sinking fishing boat in the tumultuous seas of Bay of Bengal in June 2015 (Dragomir *et al.*, 2018).

Since the primitive times till date, especially in the last couple of decades the advancement in technology is very high leading to the revolution in almost all the sectors including the maritime sector, the usage of technology has led to ease of operation, instant communication, communication on the go, speed, reduction in labour work due to mechanical tools and machineries (Grint & Woolgar, 1997). The above has led to the removal of gender discrimination due to nature of work to a large extent, for example lifting of heavy weights by operation of a crane, the deployment of an anchor through motors; the physical prowess is not required to perform these operations as the machines perform all the physical labour, similarly the advancement in communication technology has led to predict, prepare and deal with most of the unforeseen event very effectively, also the rescue operation are far more faster (Lees & William, 2013). Women are equally efficient as men in the present age of digitalization and automation in operating machines (Hansen & Jensen, 1998). The maritime trade has grown so many folds that new and non-existent supporting services have come up to support the business and thus leading to more employment opportunities, The various job roles peculiar to maritime sector have been exhibited in table 2-4 and 2-5 are gender neutral in nature especially officer cadre and onshore jobs have no relevance to the gender of the person employed.

There is a requirement of skilled and well qualified women and men with technological and managerial prowess in various sectors including maritime sector (Ahamad *et al.*, 2016). With an ever-increasing fleet in shipping industry, there is a huge demand of officers at present and in future (Baltic and International Maritime Council, BIMCO and International Chamber of Shipping, ICS, 2015), further inability of present male seafarers to bridge the demand supply gap provides ample opportunity for the women in maritime sector.

Considering the huge requirement of manpower in world maritime sector at present and in future and the availability of women workforce worldwide it is important to study recruiter's perspective on the employment of females.

2.7 Employers Perception Towards Female Employment In Maritime Sector

As stated in the previous evidences, the shortages of women seafarers are more severe as compared to men (Thiruvassagam, 2015). Moreover, the age-old perception of men to forbid women into maritime jobs by way of protecting them or of due to their physical traits had been causing a major hindrance even in promoting academic and legal jobs which could had been conveniently accessible to them as a land and onshore career opportunity

Dragomir *et al* (2012) cited an issue of lack of motivation among women to join maritime sector due to perception of companies and recruiters towards the gender beliefs regarding skills, abilities and characteristics in comparison to male counterparts etc. Theotakas and Tsalichi (2013) identified that even though women face constraints and challenges while post and pre approaching shipping companies for seafaring jobs, but the fact cannot be denied that the global shortage of officers could be filled only by hiring more efficient and skilled women workforce as evidences suggest that women are more organized socially, culturally and professionally while managing and running a ship.

Ljung and Widell (2014) cited that recruiters and ship owners have evolved their strategies on recruitment of seafarers and officers in pertinence to confrontation of various challenges like withdrawal of efficient seafarers from sea jobs to shore side jobs due to lack of interest in shipping activities or due to retirement age. And as a result, the recruiters have formulated their policies of selection criteria which involves a comprehensive review of candidate competency and knowledge levels. The technological innovation improved the ships and its operation which resulted a demand of well trained and qualified seafarers and officers with necessary certifications. Albert *et al.*, (2016) presented views to advocate inventive strategies and design career models to increase the retention of seafarers and officers through channelizing multiple career paths for employees within the organization where they can switch roles from offshore to shore side jobs and vice-a-versa in situation such as handling family and health issues without going for long leaves which further requires a comprehensive analysis on officers lifestyles and personalities by recruiters and shipping companies.

The maritime recruiters adopt varied strategies to pull out qualified and competent workforce for the sea and offshore jobs and while in the process few of them follow the conventional recruitment methods based on gender, religion and social discrimination. Such methods are still practiced in spite of the International Labor Organization, 1919 (ILO) regulations focusing on equal rights and benefits to men and women to gain productive and dignified working conditions as they would lead to increased quality work. On the contrary, the human resources departments of various shipping companies reveal the discontinuation of jobs by women due to several physical, social and professional challenges while at work (Yilmaz *et al.*, 2016). The present generation of women entrepreneurs have expanded their horizons and have developed a sense of awakening in choosing their career as maritime business.

Based on Fjærli (*et al.*, 2017), findings, apparently both male and female require different proportion of leadership attributes to sustain and grow as officers in maritime industry. Generally, males require higher levels of leadership attributes than female as stated by the recruiters through which it becomes visible that the shipping organizations and agents are highly influenced by traditional beliefs inscribed in their sub-conscious minds regarding gender differences. Researchers have reassured the unprecedented support to be given to women by maritime sector through several campaigns where companies and organization pledge to encourage, attract, recruit and retain women but as a matter of fact the system quite often has remained oblivious to keep up the pace and discontinuation to spur women's active participation in the maritime industry.

Kim (2017) highlighted efforts by ILO to promote more frequency of female workforce in transportation system through introduction of schemes like career promotions that enhances job continuity supported by adequate re-training and educational benefits. Kitada (2010) emphasis on developing practices by shipping companies and owners to exhibit intrepidity and zero tolerance from societal and managerial threats that prevent to address the issues of "gender" of female" as a core reason to restrict the sufficient female employment and to demote job opportunities at sea. And also, to unmute the voices of those who are bare witnesses of the said injustice done to females and impede their career growth and development. Tangi (2016) found out that the preposterous notions were dwelt by shipping companies that which exhibited apathy towards the problems in hiring women seafarers and prefer to either reject them out right or consider them into low profile cruise jobs before looking into their calibre and efficiencies.

Table 2- 6 Marine Recruiters And Women Seafarer Employment

Marine Recruiters and Women Seafarer Employment	References
Influence Of Societal Prejudice Towards Women Employability.	Ku, Ye, Lee, Lin and Gan (2017), Kitada (2010), Patricia (2001), Turnbull, Johnston and Clark (2021)
Gender discrimination during recruitment, inadequate crewing of vessels, Lack of basic facilities for women employees, less salary to women for similar job, lack of promotion to women at senior level.	Manjurul (2014); Tran et al (2012); Althaus et al (2013); Eisenberg and Ruthsdotter (1998); Goldberg (2016); ICS and ITF (2016); Özdemir and Albayrak (2015)
Perception of seafarers/officers both men and women towards recruiters and industry, inadequate training, lack of mentorship.	WISTA (2016) ; WMU (2016) ; Kumar and Hoffman (2002) ; Floriano (2001) ; Sletmo (2001) ; Krugman (1981) ; Mentzer et al (2001)

(Source: Authors compilation)

The evidences found in reports of International Chamber of Shipping (2021), Baltic and International Maritime Council, BIMCO and International International Shipping Federation, ISF, (2010), states the fact that increase in world trade volume is directly related to requirement of global merchant fleet and accordingly increase in demand for ship officers cannot readily be met due to long time frame involved in preparing cadets to become officers thus leading to another important aspect of maritime career that is education and its importance in maritime sector.

2.7.1 Gender Pay Gap

In simple terms when women and men do not get equal payment for the same amount of work, it is gender pay gap. It happens in every country and every profession. Because of this the motivation of women decreases. As per the data women get average 68 % of what men gets for the same work. In the countries where there is least gender parity, they get 40%. According to WEF, it will take 257 years to attain gender payment equality. And according to the researchers it will even increase by 5%. This has a very bad impact on growth and it will also hinder fully the participation of women in employment activities. This happens everywhere we can take the example of female stars in Big Bang Theory, the female stars reported that their male colleagues got high payment than them. It is the mentality of society that women will take extra leaves for their families and also sometimes women miss the opportunities because of pregnancy. After pregnancy some women take break from their career and even when they don't take still, they will not be able to work

smoothly. So, these all are the reasons for which women get less payment. But this affects very badly when it comes to productivity and participation of women (McCrthy, 2021).

2.8 Studies On Women In Maritime Sector

The snapshot of the selected studies related to women and maritime sector is represented in the Table 2-7.

Table 2- 7 Women in Maritime Sector

Crux of the Study	Authors
Portuguese women were actively involved in the local and international trade. In Portugal men ruled the sea and women ruled the land. She also dealt with the catch and cash, when men arrived from sea along with the household care.	Abreu-Ferreira (2000)
The organizational socialization impacted the women's workplace culture and women's career development.	Wu <i>et al.</i> , (2017)
There exists a dearth of qualified maritime officers with seagoing experience. As per Integration of Women in the Maritime Sector (IWMS), who received training were appointed to a higher-level management post.	Cristina <i>et al.</i> , (2012)
The study highlighted the role of single women in maritime sector which was from trained nurse to professional.	Beattie (1992)
There was a strong need for gender parity in the maritime industry. Technological advancement in maritime sector would increase employability of women.	Kim <i>et al.</i> , (2019)
Economic violence which involved control and monitoring of individual's behaviour in terms of use and distribution of money and also not allowing access to economic resources. Such violence was high in the women working in maritime sector of Istria country.	Miskulin (2020)
The role of European Maritime Education and Training Institutes was appreciated to increase the enrolment of women in maritime education. The reaction to gender equality was studied in the shipping sector. The ropes were required to be untied.	Horck (2010)
The role of IMO in supporting the advancement of Caribbean women in maritime sector for sustainable development of the sector immense. Identification of challenges and strategies were done so that it may be overcome for advancement of women in the maritime sector.	Grant and Grant (2015)
At the time of maritime disaster, women have a different survival disadvantage compared with men. The human-behaviour on the ship during the life and death situations represents the fact that every man or woman was for him/her self.	Elinder & Erixson (2012)
Gender issues were not addressed in the maritime course curriculum, no strategies were also highlighted to mitigate the same. A gender-inclusive pedagogical strategies were required along with increasing the number of female students. Such actions would reduce the gender gap and promote equality.	Cars and Osterman (2015)
Women sailors tend to quit their job at the early stage and join the maritime academia for a proper "lady like" land job.	Popescu & Varsami (2010)

Crux of the Study	Authors
The Southeast Asian seafaring communities it was noted that women did not become sea pirates due to her household role, social patterns and active presence in the local commerce.	Sugiyama (2021)
The maritime Sikh society tried to preserve their 'Punjabi' culture and overcame variety of obstacles to develop a bicultural identity to live comfortably in the third space.	Sodhi (2007)
In the Eastern and Southern Africa the participation of women managers was noted at a higher rate in the maritime industry. To be successful in the maritime sector, a woman was required to live a work-led life rather than the work-life balance.	Bhirugnath-Bhookhun and Kitada (2017)
The efforts to increase the women participation in maritime industry would be possible only through imbibing skill and expertise. The ILO and WMU had worked in tandem overcome the gender imbalance.	Jones (2008)
Despite increasing the awareness among women, the gender gap was noticed in the maritime educational and professional sector of Spain. Proper gender policies were needed for women enrolment for which the combined effort of maritime administrators and IMO was required.	Barahona-Fuentes et al., (2020)
On board harassment was experienced by every UK women seafarers, which impacted their occupational health, safety and wellbeing. It resulted in the failure of leadership and onboard healthy culture.	Pike <i>et al.</i> , (2021)
Stereotypes creates gender biases, which creates an unwelcome atmosphere for women on the ship. It further escalates into anxiety, work dislike and work hesitation. Negative stereotypes in the minds of men as well as women refrain them to work cordially.	Ozdemir, and Albayrak (2019)
Filipino women seafarers faced discrimination, she often felt lonely, faced sexual harassment and experienced bullying from the male colleagues on the board. The patriarchal belief kept women away from pursuing careers at sea.	Makashina and Filatova, (2018)
Education was regarded as a tool to rectify gender inequalities and develop competencies to assist women to the maritime sector and that too at the leadership level. When the social context, education context and employment context were woven together the traditional male dominated industries like mining, construction and utility industries, started welcoming women in the same.	Baya (2015)
Women entrepreneurs often found the opportunity in waste management to support circular economy concept. Women could not have access to ships to transport the collected recycling items to recycling facilities overseas. Sustainable economic development in Pacific Island would be developed if the missing link between women's economic participation and maritime transport sector were addressed.	Kitada <i>et al.</i> , (2018)
There exist a socio-economic and organizational benefits of increasing women's access at leadership position and also in decision-making process. Gender equality across the ports and maritime sector was suggested in the study.	Pastra and Swoboda (2021)
Implementation of robust legislation was required to overcome the under-representation of women in the maritime sector.	Kumalo and Reva (2021).

Crux of the Study	Authors
Boat-building, sailing, fishing, trading, exploring and colonizing were the male dominated trades, similarly maritime archaeology was also the domain of males and not females.	Ransley (2005)
Shipping companies do not prefer to hire female cadets as it may disrupt the status quo of male artefacts and invite problems for the female bodies. For a more gender inclusive approach, the shipping companies were suggested to create a climate of openness, promote organizational bravery to lift the gender issues as a formal agenda rather than supporting muteness on the sensitive issue.	Kitada and Langåker (2017)
Researcher suggested an improvement strategies to increase women participation in women maritime transportation industry.	Abd Rahman and Salleh (2018)
Women working on the cargo ship often faced gender related problems (including sexual harassment) to overcome this she adopted various identity management strategies such as negotiators, constructors, maintainers and reproducers.	Kitada (2013)
Women often face difficulty in rising to the top position in male dominated sector, due to the glass ceiling syndrome and gender bias.	Özdemir, and Albayrak (2015)
Women in Africa had actively involved in the maritime sector from shipping, maintenance and port services to financing.	Dudman (2015)
A maritime sector's leader was built on the method adopted to operate the ship, management of things on ship, taking high responsibility and stakes and also building agentic leader where one has to take fast decision and execution of orders. Women would be able to rise as a leader if she adopted the communal and agentic leadership features.	Vedenpää (2019)
The gender bias had been so high in the maritime sector that employees in the maritime sector had lower expectations from female leaders which.	Fjærli <i>et al.</i> , (2017)

2.9 Worldwide Efforts To Increase Women Participation In Maritime Sector

Considering a very low employability of women in maritime sector; 30 years ago, International Maritime Organization (IMO) under the aegis of United Nations, had fore frontally introduced a global program known as the Integration of Women in the Maritime Sector (IWMS) who implemented a ground work and had designed institutional framework to incorporate a gender dimension into its policies and procedures and ensure access to maritime training and employment opportunities for women (International Maritime Organization, 2018).

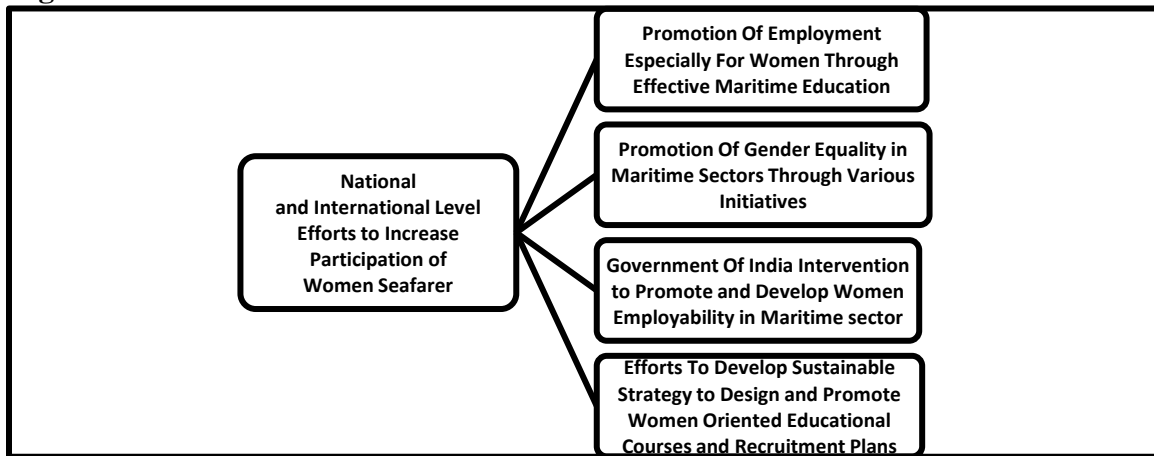
Organization like United Nations (UN), European Union (EU) and Organisation for Economic Co-operation and Development (OECD) and international transport women Federation have made several efforts to address women issues and introducing policies and programs to build their maritime career and protect their vulnerability at sea.

Dignified organization and institutions of the world like International Maritime Organisation and World Maritime University have promoted and benefited the women of the world to choose and excel in their maritime career through introduction of several campaigns and programs like UN Millennium Development Goal 3 “To promote gender equality and empower women” and integrate women into main stream maritime activities and provide adequate access to training and technology with percentage increase in senior management positions that can strengthen individual identities rather than focusing on pre-determined gender perspectives (Cars and Österman, 2014). Dragomir (2015) stated that International Maritime Organisation recognizes the need to encourage the entry of women into the merchant marine profession and acknowledges the importance of a sustained strategy, addressed to all maritime stakeholders including training institutes, maritime administrations, shipping companies, crewing agencies, industry and seafarers themselves, that will facilitate the growth of equitable seafaring career opportunities for both women and men. Clynch & Gaudin (1982) emphasized on improvement in female employment percentages in maritime sector after the implementation of affirmative action policies in favor of women by the government of the mentioned country and as a result it is expected that such recognized initiative on similar lines can promote that woman to choose maritime carrier frequently. Mathew (2015), cites the importance of increase in women participation in seafaring jobs and a need of a gender sensitive approach towards women seafarers onboard as several socio-economic driven factors persist into the women with regards to their perception of choosing a maritime career along with balancing family life simultaneously with greater efficiency. To bridge the gender gap, several organizations, unions and companies have accomplished many tasks in the last decade to promote gender equality awareness among people and address to male seafaring community to accept women in the maritime industry (International Labour Organization, 2003).

Since the first initiative by IMO in 1988 regarding inclusion of women in maritime sector even after 30 years of continuous efforts the total percentage of women still remains same. In order to create a meaningful impact a major step taken by IMO and on the occasion of world maritime day 2019 IMO has dedicated this year to increase its effort in maximum inclusion of female participation in Maritime sector; the World Maritime Day theme for the year 2019 is "Empowering Women in the Maritime Community". The theme highlights the importance of women and their empowerment and also an opportunity for IMO to act on ground and ensures with various stakeholders the inclusion of females in various maritime roles. Further to create an environment with inclusion of

women in maritime administrations, ports, maritime training and related fields. Also, to empower women and various similar institutions working towards the betterment of the women employed in maritime sector. With respect to India the Ministry of Shipping, Government of India has undertaken several initiatives at multidimensional levels through projects like ‘Make in India’ and ‘Sagarmala Project’ (Royce, 2017 and Pradhan, 2016). The path breaking initiatives are namely port modernization, inland waterways, coastal shipping development, public private partnership in maritime sector, green energy promotion, development of manufacturing hubs, IT development and most importantly talent skilling of sustainability, revision of operational policies, paperless regime etc through some of the key maritime development projects (Ministry of Shipping, 2011). Women reservation of 33% at all the government jobs may have a direct impact on the employability of women in maritime sector.

Figure 2- 11 National And International Level Efforts To Increase Women Seafarer



(Source: Authors compilation)

The initiatives at global and national level will yield result only once the business takes the initiative and necessary steps in order to achieve the primary objective of a gender-neutral maritime sector.

2.10 Research Gap

The existing literature highlighted that the work of women in informal sector was under appreciated and in the formal sector it was highly discriminated in terms of cadre and pay. Women at times were forced to sacrifice her career and she faced many problems at workplace. Historical scholars of west pointed out that woman was stereotyped as evil and physically timid to perform her duty on the ship. Scholarly work brought out that only in Portugal women were empowered to run the

shipping business. The role of women was appreciated in political, social and other fields by Canadian historians. Literature also brings out that women cross-dressed to hide her identity to work on ship. In the West, Post-World War-II women took job in male dominated sector. Researchers of West have immensely contributed on problems faced by women in maritime sector such as psychological and physiological, which often resulted in health issues, career breaks, quitting the job despite lucrative promotion opportunities. Assessment on various factors like women at managerial positions in maritime sector offshore jobs in countries like Norway, Japan and Singapore were conducted. World Maritime University conducted studies on the women students, their perspective towards employment, reason for choosing maritime career, countries like South Africa, Philippines had done the studies related to challenges of women in maritime, European countries had done research on various factors like employer gender neutral policies, provision of facilities to women seafarers, assessment for lower percentage of women . The studies also proposed that similar set of examination in countries like China, India, Philippines, and Bangladesh may reveal important outcomes as they were the major suppliers of maritime fleet outside Europe.

The maritime sector is a highly male dominated sector and a clear gap is observed in the employment of women in this sector. The present and future requirement of Officers in the sector that cannot be filled with existing trend of male officers, the sector carries a huge potential for women across the globe. The newspaper article (“World Faces Shortages”, 2021), stated that by 2025, a significant skills shortage shall be visualized due to lack of specialized crew on board, as per the report by Baltic and International Maritime Council (BIMCO) and International Chamber of Shipping (ICS) acknowledges the same and as a result there may be a huge setback in terms of sourcing expertise and proficient skill sets to operate complex and technical tasks on/off shore.

The age-old perception of women not suitable for marine profession due to their physical limitation has lost its factual value due to technological advancement in field of mechanical, communication and Information Technology in last two centuries (Grappasonni *et al.*, 2012). World War II onwards women have performed roles only considered suitable for males in maritime sector, presently all possible job roles have the presence of women breaking the entry barrier and perception (Findlay and O'Rourke, 2009). Although the ground reality still shows only two percent of women participation in world maritime fleet.

IMO intervened thirty years back to increase participation of women in Maritime sector by its programs of Integration of women in maritime sector (IWMS) in 1988 and in spite of regular intervention there is no visible change in the employment percentage leading to a gap in the approach and methodology adopted against ground realities. Notwithstanding the cognizant approach hailed at various maritime conferences where research papers on women's state of mind while at sea and their gender skews were applauded quite recently along with the indepth research done by several maritime historians on the aforesaid subject, analysis revealed a dearth of thorough studies on lack of concrete background on women's challenges at sea which would have rather led to formation of hypotheses focusing on the irony of social interests that were served by such gender exclusions (Stanley, 2002). Jo (2011) notified a very low impact of the UN Millennium Development Goal (MDG, to promote gender equality and empower women) on the development of capacity-building of women seafarers at sea. In its further efforts to increase the women participation IMO had committed year 2019 to the empowerment of women in maritime sector.

With respect to the training and educational support; the inexplicitness by not addressing gender issues as a part of course plans and studies is symptomatic to meagre female enrollment in courses that require core maritime expertise and specific skill sets. Tangi(2016) pointed that in most of the countries during the final years of pursuing maritime courses the maritime training institutions drastically fail in providing effective practical exposure of their course content.

International Maritime Organization (n.d.) emphasized for country like India on its inevitability to sustain its dignified position of supplying topmost seafarers to the world and to evolve the decades old maritime education, training and examination system to its brilliance. Ministry of Shipping (2011) stated that the shipping activities are an amalgamation of practical and administrative experiences especially with a high remuneration in the field of legal and financial expertise services which are inevitably essential but in contrast there is a huge shortage found for such expert manpower. Reward and incentives by government/international bodies is lacking, in countries like Tunisia, women's emancipation had been enforced as a law to open the doors to various avenues in maritime as well as other fields (Tessler *et al.*, 2013).

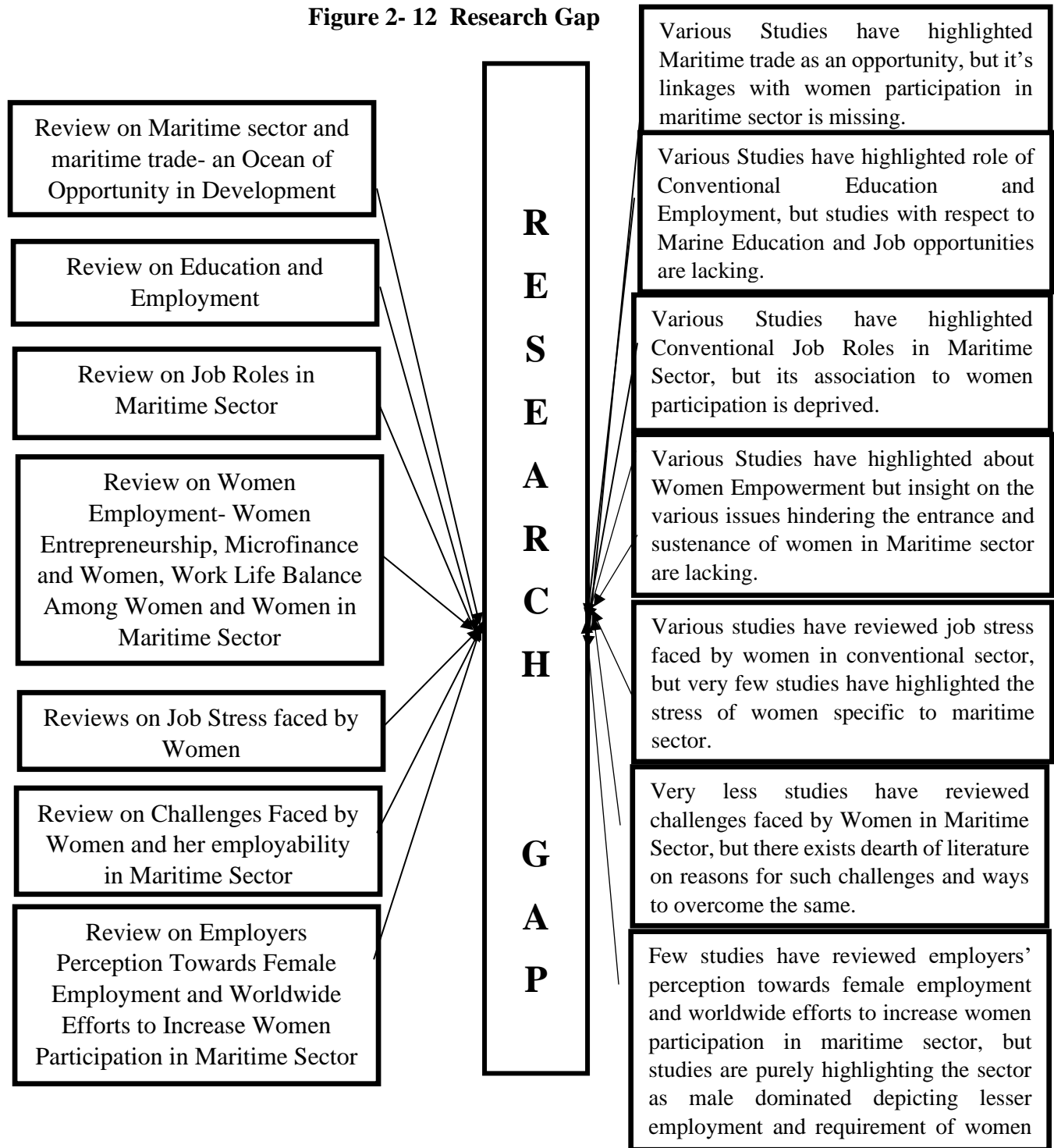
India being the third largest supplier of seafarer to the world maritime fleet has a credible record of providing quality seafarers although the percentage of women seafarers' contribution by India is drastically low. In 1998, India reported 43,000 registered seafarers out of which only three were

women. As per Indian seafaring data till today total 4,548 lady seafarers are there since women started entering this profession where officers have been only 0.0015%. In year 2017, total 1,54,349 were active seafarers, out of which 810 were women seafarers including hospitality crew; out of these 810 only 121 were officers and thus percentage is very low. Although there is no national level study or state level study conducted on the employment statistics of women seafarers in India, no training institute data has been surveyed regarding the women trainees in the institutions over a period of time.

Further against more than 140 DG shipping approved maritime training Institutes, Gujarat having the longest coastline of 1600 kms and maximum trade via sea route in country has only 3 training institutes, no specific research done or record available on the women employment in Gujarat Maritime sector. Considering the huge employment potential in maritime sector especially at Officer Level in world maritime fleet at present and in future Indian women stands a bright chance in employment as officers and bridge the demand supply gap of the world maritime fleet.

Also, the literature review, highlights other lateral studies that supports the various issues working women are facing and are correlated to our studies on women in maritime sector, the society, culture, responsibilities at home, changing social norms , gender imbalance and women adjusting and adapting to the new norms are highly visible in most of the studies, further there is a clear need visible from the studies undertaken that vivid areas of women in maritime sector in India needs in-depth research considering the potential of India and dearth of talent pool available in world maritime fleet India. The research in progress has a potential to give insight on the various issues hindering the entrance and sustenance of women in Maritime sector and may provide a valuable input to the regulatory and governing bodies in order to charter various guidelines and policy decisions.

Figure 2- 12 Research Gap



(Source: Authors compilation)

Therefore, existing studies in Indian literature consist in the area of women entrepreneurship, empowerment of women through microfinance, work-life balance and studies on stress

management by women. In the Indian context sparse literature existed on women employability in maritime sector. The poor plights of women working on British ships were described. The study of government report brings out the fact of huge employment opportunities in maritime sector, and enactment of various laws to support the career entry and growth. At Gujarat (regional) level no such study was found which appreciates the role of women employability in maritime sector, the present study tries to fill this gap.

2.9.1 Need For Further Research Highlighted

Kitada and Bhrigunath (2019) conducted assessment in 3 countries Norway, Japan and Singapore for women at managerial positions in maritime sector offshore jobs and concluded that very small amount of women were employed at managerial posts although the relevant qualification, years of experience and relevant criteria for the promotion qualifies more women, the study highlighted that the same may vary from country to country and more study needs to be done at other countries in order to establish a certain trend. ITF Seafarers (n.d.) reflects different aspects that Maritime union of different countries highlight with respect to the women employed in maritime sector like “Women do not have sufficient time to spare for union work as they have multiple roles to play in the family and at work.” Cochin Port Staff Association, described that only 9 to 10 per cent women were in the port sectors and 0.29 per cent at sea – and they were usually in the traditional [women’s] jobs of administrative work, cleaning, typing etc. There were very few women crane operators and shore workers (Transport and Dock Workers-Union, Mumbai, India).

Maritime Union of Australia explained that women were unaware of the profession and often think it is not a viable career for them. Traditional opposition to women in maritime industry is the biggest obstacle, bias by the employers with the age-old perspective and false belief that women were not suitable for the work, and sometimes finding women who want to work in the industry. The Japan Seafarers’ Union reported a lack of on-board facilities like separate washroom, toilets, washing machines, as well as on-board harassment, and the difficulties of on-board communication. Researchers have highlighted various available job opportunities offshore and onshore where the women are employed and highlighted the importance of similar exercise at other maritime countries as well to replicate the model. The European Commission prepared a business case to increase the participation of women in transport sector the important outcome reflects barriers from Employee perspective. Stereotyping, gender discrimination, work life balance, sexual harassment, wage gap, training, job perception etc, although the research was limited specific to

Europe with specific organization but has paved a path for other countries to further progress on the similar lines. As per the SIRC and ILO survey (2003) outside Europe figures also vary: women make up 1.1 per cent of Brazil's seafarers, and 5 per cent of Indonesia's, in 1998 India reported only three women out of 43,000 registered seafarers; by the end of 2002 there were twelve. In the Philippines, the largest supplier of seafarers to the world merchant fleet, only 225 women out of 230,000 seafarers appear on the international seafarers' register for 1983-90. Employment Contract studied for European countries highlights rejection of female prospective employee only on the basis of gender although the other requisite may be equal or better than male counterparts, the similar set of examination in countries like China, India, Philippines, Bangladesh may reveal important outcomes as they are the major suppliers of maritime fleet outside Europe (Kitada and Langeker, 2017).

A Case Study on Gender Equality and Women's, Empowerment Policies Developed by the World Maritime University for the Maritime Transport Sector in 2017 shows that out of 504 dissertations written between 1985 and 2016 in the Malmo Campus, only 3 research work had focused on gender, similarly on studying the annual intake report of Indian Maritime Universities all six campus it has come to notice only 44 female students registered against the strength of 1350 i.e., just 3.25% of the total seats. Therefore, it is vital to approach the countries that contribute more to the seafarer community and similar studies should be extended to other countries as well because trying to develop a single model of important facts to apply cross-culturally may not be possible (Edirisinghe *et al.*, 2016). It was observed that very limited studies in India have been done in context with the women in maritime sector and a plethora of scope and areas available for further research that have been highlighted by various authors and have been suggested in the research, in order to further have an in-depth insight on the perspective of women employment in the maritime sector.

CHAPTER-3

RESEARCH METHODOLOGY

3.0 Background

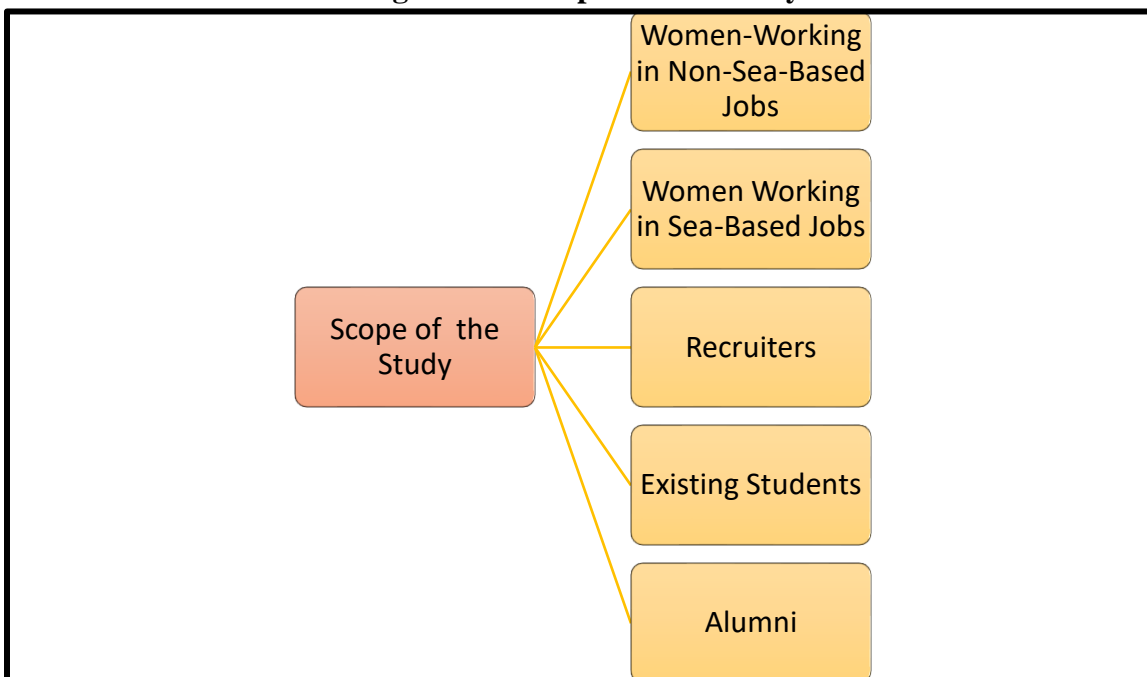
The present chapter tries to describe the roadmap adopted for conducting the present research. It mainly describes the research questions adopted for the study. It explains the research design, research objectives, sampling design, method of data collection, technique of data management and analysis of the gathered data. The chapter at length also explains the designing of questionnaire and the framing of interview schedule. All the details right from framing the objective to the final methodology adopted for data analysis are explained in detail. The adoption of the method or approach is supported with necessary justification. The chapter provides the complete course of action used by the researcher during the study.

3.1 Scope Of The Study

The scope of the study describes the extent to which the research area was explored in the study and also specifies the parameters within which the study was conducted. The purpose of the study was to explore the demand and the supply side angles. From the perspective of women working in maritime sector, the study tried to understand the challenges and opportunities faced by her. From the recruiter's perspective the study tried to explore the willingness of recruiters to hire females in the maritime sector and also identify the reasons for the same. The study also tried to comprehend the perception of students and alumni towards the maritime sector. The population of the study consisted of women working in maritime sector, recruiters of maritime sector and students studying or passed-out from the maritime course. The study was restricted to Gujarat state only. The entire period of the thesis was four years. Past feminist theories were studied to explore the challenges faced by working women in the maritime sector

The research methodology adopted in the present study is divided into five parts. The first part consists of women working in non-sea-based jobs, second part consists of women working in sea-based jobs. The third part consists of opinion of recruiters. The fourth part consists of opinion of existing students and the fifth part consists of alumni. The details of the same is described in the Figure 3-1.

Figure 3- 1 Scope Of The Study



(Source: Author’s Compilation)

It may be noted from the Figure-3-1, that the challenges faced by women who were working in maritime sector was studied through the opinion of women working in non-sea-based and sea-based jobs. The opinion of recruiters was also taken to identify if they preferred to recruit the women or not. The opinion on opportunities were studied by understanding the perspectives of alumni and existing students.

3.2 Research Objectives

The researcher pondered on the research questions and based on it the research objectives were framed. Every objective of the research was further studied and documented in the form of the chapter. The summary of the same is described below:

Table 3- 1 Research Questions, Objectives And Context

Research Questions	Research Objective	Research Context
Are women entitled to receive jobs in maritime sector? What types of jobs are available for women, who wishes to pursue a career in maritime sector?	To study the job description of women employees in maritime sector.	Literature Review

Research Questions	Research Objective	Research Context
Which specific skill or degree is a pre-requisite to avail the job in maritime sector? Which educational institutes offers maritime related courses?	To evaluate the courses run by various institutes in Gujarat specific to maritime sector at under – graduate and post graduate level.	Literature Review
Do women who work in the maritime sector face challenges? Do the women who work in sea-based jobs face more challenges than women who work in non-sea-based jobs? What kind of challenges does the women face, if she works in sea-based or non-sea-based domains of maritime sector?	To study the challenges faced by women working in the maritime sector.	Data Analysis and Findings (Empirical and Qualitative)
What apprehensions do recruiters have when it comes to recruiting women in the maritime sector? Do recruiters prefer to recruit women in sea-based or non-sea-based jobs?	To understand the perception of recruiters towards prospective female employees.	Data Analysis and Findings (Qualitative)
Does the final year student become employable post-pursuing the course on maritime sector? What kind of opportunities and challenges are perceived by the existing students with respect to maritime sector? Did alumni find themselves employable post-pursuing maritime course? What kind of opportunities and challenges are perceived by alumni in maritime sector?	To study the perception regarding opportunities and challenges toward the employability of existing final year students and alumni.	Data Analysis and Findings (Empirical)

(Source: Author's Compilation)

3.3 Research Design

Research design is based on a framework and provides a direction to the investigation being conducted in the most efficient manner (Chawla and Sondhi, 2011). In other words, research design brings gives the blueprint of how to conduct the research. There are broadly two types of research design, namely Exploratory and Conclusive. The conclusive research is more formal and structured than exploratory research. It assists the decision maker in determining, evaluating, and selecting the best course of action to take in a given situation (Malhotra and Dash, 2011). It helps in taking managerial decision. The conclusive research design may be either descriptive research or causal research. The role of descriptive research design refers to the major objective of describing something i.e. market characteristics or functions (Malhotra and Dash, 2011). The descriptive

research design may be further classified as single cross-sectional design, in which one sample of respondents is drawn from the target population and information is obtained from this sample only once (Malhotra and Dash, 2011). It is relatively cheap and less time-consuming method of research. Moreover, the single cross-sectional method permits to collect data from a large pool of population and also helps to compare the differences between the groups (Thomas, 2021).

In the descriptive research, the researcher is concerned with what something has happened rather than understanding why something has happened. In such type of research, the survey tools are considered the best to collect the reasons for the happening or perception (Nassaji, 2015). Descriptive, Single Cross-Sectional Research design was adopted to study the challenges faced by women working in non-sea-based maritime sector.

Exploratory research design technique is the backbone for comprehending the “why” and other factors that needs to be clearly defined. It provides a better understanding of a thing or phenomena. It is primarily used for qualitative type of research (GutCheck, 2019). It offers more holistic understanding of the phenomena and offers rich collection of data for identifying recurring themes, patterns or concepts and then describing and interpreting those categories (Nassaji, 2015). Thus, Exploratory research design was adopted for studying the challenges faced by women working in sea-based maritime sector and also to investigate the perception of recruiters towards prospective female employees.

In order to study the perception of existing students and alumni towards the opportunities and challenges on employability, post-pursuing maritime course, a descriptive, single cross-sectional research design was adopted. Such research design helps to gather accurate and systematic description of “something or someone” in the context of the study and also helps to check the association between two or more variables (Dulock, 1993).

3.4 Data Sources

There are mainly two method of data sources, viz., Primary Method and Secondary Method. Primary data is the original, problem-or-project-specific and collected for serving a particular purpose. The primary data collection technique adopted was soliciting the information from the respondents. When information is solicited explicitly, then the researcher can design the data collection optimally with respect to the research questions (Hox and Boeije, 2005). Thus, adopting primary data collection method is useful in the social science research. Secondary data is not topical or research specific. It has been compiled by some other researcher or investigative body. The

information collected earlier is recorded and published in a structured format, and thus, is quicker to access and manage (Chawla and Sondhi, 2011). Official statistics, administrative records or other accounts kept routinely by the organizations are often referred in secondary data (Hox and Boeije, 2005). Internal source of secondary data refers to organization-or-environment-specific source and external is based upon the sources available outside an institution (Chawla and Sondhi, 2011). The researcher had used the primary as well as secondary data in the research. Primary data was collected from women working in non-sea-based jobs, sea-based jobs, recruiters, students pursuing maritime course and alumni. Secondary data was gathered for writing literature review and also a starting base for designing the questionnaire. Due to technological advances, it is now, very convenient to use the collected, compiled and achieved secondary data in research (Johnston, 2017).

3.4.1 Primary Data

The primary data was gathered through a structured questionnaire. After proper literature review and discussion with the subject expert of Human Resource, three questionnaire and two interview schedules were prepared. The first questionnaire was prepared to understand the challenges faced by women working in non-sea-based jobs. Second questionnaire attempted to study the perception of opportunities and challenges with respect to the maritime sector jobs. Moreover, it also tried to identify if students considered themselves to be employable post-pursual of the maritime course. The second questionnaire was administered on the existing students, who were pursuing the course. The third questionnaire also tried to comprehend the challenges and opportunities as perceived by alumni who were working in the maritime sector. The first interview schedule tried to address the challenges faced by women working in the sea-based jobs. The second interview schedule tried to explore the opinion of recruiters towards employing women in the maritime sector.

3.4.2 Secondary Data

Internal sources of secondary data such as company record of GMB was referred to gather the details on number of female employees. External sources of secondary data referred were published reports from GMB, Baltic and International Maritime Council (BIMCO) reports and reports from Directorate General of Shipping. Published papers in offline Journals, online journals, full-length papers from J-Gate, Google Scholar, Conference proceedings, papers from Edited Books, Working Papers, Articles in Newspapers, Books, Magazines, Internet Webpages, Papers from Blogs were referred. Electronic Databases such as Pro-Quest, EBSCO etc. were referred. Secondary data was

also collected by visiting libraries of Entrepreneurship Development Institute of India-EDII, Gandhinagar and Indian Institute of Management-IIM, Ahmedabad. Office of Gujarat Maritime Board was also visited for gathering the relevant data.

3.5 Nature Of The Study

The nature of the study may be of two broad types, viz, quantitative or qualitative. Quantitative research refers to using numbers or close-ended questions in the study. It tries to test the theories by examining the relationship among variables. The phenomena is understood by collecting numerical data that are analyzed using mathematical methods (Creswell and Creswell, 2017). The quantitative research is best suited for descriptive research (trying to describe) and inferential research (trying to explain something rather than just explaining it) where the ultimate goal of the research is to generalize the truth found in the samples to the population (Sukamolson, n.d.).

The qualitative research refers to exploring and understanding the meaning that individuals and groups relate to a social or human problem. It tries to inductively analyze data from particular conversation to the general terms (Creswell and Creswell, 2017). Qualitative method tries to understand the research subjects from the inside out. It starts with the blank slate approach. It helps to find the richness and depth in the investigation (Rich and Ginsburg, 1999). Qualitative research includes open-ended questions, so that participants can express their view. It tries to understand the context and most useful for exploratory type of research and provides the comprehensive analysis to the research problem (Creswell and Creswell, 2017). Adopting a single method often fails to explore the true essence of the research. The use of a mixed method (i.e. Quantitative and Qualitative) is suggested to overcome the weakness of two standalone methods of research (Amaratunga *et al.*, 2002).

In the study of women working in non-sea-based jobs of maritime sector, the quantitative approach of research was adopted. A few questions here and there were open-ended, otherwise it was all quantitative in nature. With respect to recruiters and women working in the sea-based jobs of the maritime sector, the qualitative approach of research was adopted. In order to understand the opinion of the existing students and alumni the quantitative approach of research was adopted, with an exception of few questions being open-ended.

3.6 Measurement And Scaling

Measurement refers to assigning numbers or some other symbols to the characteristics of certain objects. In the research the respondent's perceptions, attitudes or any other relevant characteristics

are measured. The measurement is in numbers so that the statistical analysis of the resulting data may be conducted and it offers ease of communication of measurement results (Chawla and Sondhi, 2011). In the present study nominal scale was used where the numbers were used as a descriptor. The numbers were assigned for the purpose of identification of the objects. The nominal scale may be either single choice, or dichotomous or multiple-choice question. The relative positions of the objects were indicated by the ordinal scale, which was also used in the questionnaire. The ratio scale which has a meaningful zero interpretation was also used in the questionnaire. Scaling involves creating a continuum on which measurements on objects are located. Interval scale referred to the continuum scale on which the attitude or opinion of the respondents were measured, were used in the questionnaire. An attitude in research refers to the outlook to respond to consistently in a given manner to various aspects of the phenomena, events or objects. The attitude was measured using a construct which was a multiple-item scale, wherein each item formed some part of the construct that the researcher was trying to measure. A multiple-item agree-disagree five-point Likert scale was also used in questionnaire to seek response from the respondents. The Likert-Type scale is a non-comparative scale, where, the respondents do not make use of any frame of reference before answering the questions. In other words, each item measuring the construct was to be answered independently of the other item, measuring the same construct. It was itemized rating scale where the respondents were provided with a scale that had a number of brief descriptions associated with each of the response. In other words, in the questionnaire, each number on the continuum scale was decoded with what it textually tried to explain (Chawla and Sondhi, 2011). In the qualitative research, the questions are open-ended and the response to the same are in detail and textual in nature. The measurement and scaling used in the study is discussed further.

Table 3- 2 Measurement And Scaling

Study Part of the Questionnaire	Nominal Scale	Ordinal Scale	Internal Scale (Itemized Rating Scale- Likert Scale)	Ratio	Open-Ended	Total Number of Questions
Women Working in Non-Sea-Based Jobs	8	1	51	3	3	66

Study Part of the Questionnaire	Nominal Scale	Ordinal Scale	Internal Scale (Itemized Rating Scale-Likert Scale)	Ratio	Open-Ended	Total Number of Questions
Women Working in Sea-Based Jobs	2	0	0	1	24	27
Recruiters	0	0	0	2	19	21
Existing Students	23	0	68	1	3	95
Alumni	16	0	90	1	5	112

(Source: Author's Compilation)

It may be inferred that all the type of scales were used where-ever possible in the framing of the five different questionnaires. In the descriptive study, majority of the questions were itemized rating-scale. In the exploratory research most of the questions were open-ended. Open-ended questions are unstructured. Thus, the words, logic and structure are provided by a respondent and not the researcher. In the close-ended questions, both the question and response formats are structured and defined. The respondents need to just select the option(s) that he feels are expressive of this opinion. Dichotomous questions have restrictive alternatives and provide the respondents only with two options. Under multiple-choice question, the respondent is asked to choose the one that is most applicable from the number of response alternatives mentioned. Scales refer to the attitudinal scales of Likert type, where the respondent is required to simply agree or disagree on the statement (Chawla and Sondhi, 2011).

3.6.1 Research Instrument Development

Research instrument refers to any tool that is used by the researcher to obtain, measure and analyze the data (Impactio, 2021). Research instrument could be either interviews, tests, surveys or checklists (Teachers College, n.d.). Questionnaire is treated as the research instrument. Questionnaire is the spinal cord of the survey. It aims to collect quantitative primary data in a standardized manner. It helps to bring out the hidden confidentiality and also the researcher can corroborate his findings with that of other researchers in the same domain (Roopa and Rani, 2012). The questionnaire was designed in a proper way considering the time taken to fill up, length of the questionnaire and the appropriate number of questions to seek the research answer. Those questions which had identical response categories were put in a matrix format, where in the question was placed one under the other and response categories along the top, in order to ensure time

management and space management (Roopa and Rani, 2012; Chawla and Sondhi, 2011; Malhotra and Dash, 2011). It is often referred as fixed-alternative question that required the respondents to choose from a set of pre-determined answers (Chawla and Sondhi, 2011).

Various close-ended questions were also put in the questionnaire, which were either dichotomous or multiple choice or likert-type five point scaled (Roopa and Rani, 2012; Chawla and Sondhi, 2011 and Malhotra and Dash, 2011). This was done to ensure that respondents could fill up the questionnaire quickly and the researcher availed the answers to the questions which was aimed to be researched. Open-ended questions wherein the options or predefined categories were not suggested, were also put in the questionnaire. The respondents were expected to reply in their own words without being forced to make a choice from the given options, which was the case in close-ended questions (Roopa and Rani, 2012; Chawla and Sondhi, 2011; Malhotra and Dash, 2011). Open-ended questions were put bare minimum, so that the respondents filled the questionnaire completely instead of half-filled or skipped the answers to the important question, which diluted the entire survey exercise. Structured questionnaire was prepared in which there were definite, concrete and predetermined questions. The questions were presented with exactly the same wordings and in the same order to all the respondents. The arrangement of questions in the questionnaire was kept logical and in a proper flow. The language of the question was kept very simple, the questions were not verbose, long-questions were avoided and overall, the care was taken that the respondents did not find the questionnaire filling exercise as a pain or ambiguous task (Roopa and Rani, 2012; Sukamolson, 2007).

The qualitative data collection methods are mainly unstructured in nature. But when a set of questions were prepared beforehand and asked in the interview it is often categorized as structured interview (Kashyap, n.d.). The pre-set questions before the inception of the interview may be referred as interview schedule (Malhotra and Dash, 201; Chawla and Sondhi, 2011). During the interview if branching questions or new follow-on questions were asked by the researcher to gain proper clarity, it was referred as unstructured interview (Kashyap , n.d.).

In the study of women working in non-sea-based jobs the questionnaire mainly consisted of close-ended questions and couple of open-ended questions. In the study of women working in sea-based jobs and also of the recruiters, open-ended questions were put to seek detailed answers. With respect to the study of existing students and alumni the pattern of questionnaire was mostly close-ended and followed by few open-ended questions.

3.6.2 Description Of Variables And Questionnaire Design

Questionnaire and Interview Schedule were prepared to elicit response from the respondents. The broader description of the questionnaire and interview schedule is explained further.

3.6.2.1 Questionnaire Designing For Women Working In Non-Sea-Based Jobs

The details with respect to designing of questionnaire to seek answers from the women working in the non-sea-based jobs is discussed further.

Table 3- 3 Questionnaire Details Used For Women Working In Non-Sea-Based Jobs

Broad Title	Theme of the Question	Number of Questions	Total
Demographic Details	Name	1	8
	Location (District)	1	
	Age	1	
	Educational Qualification	1	
	Stream of Education	1	
	Maritime Specific Course	1	
	Marital Status	1	
	Number of Children	1	
Organization Details	Current Organization	1	4
	Nature of Employment	1	
	Organizational Level	1	
	Current Department	1	
Work-Experience	Experience in Maritime Sector	1	3
	Total Work Experience	1	
	Gross Annual Salary	1	
Work-Life Balance	Leisure Activity	1	7
	No Overtime	1	
	Sufficient time for family and friends	1	
	Social Benefits	1	
	Balance between work and non-work activities	1	
	Work flexibility	1	
	No burn-out	1	
Training Discrimination	Exclusion of females from training	1	4
	Allotment of equal time and resource	1	
	Pay discrimination towards female	1	

Broad Title	Theme of the Question	Number of Questions	Total
	Similar roles but different wages and titles	1	
Pay and Promotion	Difficulty in finding job	1	6
	Lower wage rate increase for female	1	
	Lack of career development programmes	1	
	Unfavourable performance assessment	1	
	Core jobs for males	1	
	Restriction to move to departments of career advancement	1	
Leave Policies	Long maternity leave	1	3
	Maternity leave and denial of promotion prospects	1	
	Proper number of maternity leave	1	
Career Development	Stoppage of promotion after certain point	1	4
	Removal of obstacles to promote women	1	
	Faster promotion for males than females	1	
	Promotions of men is likely	1	
Work-Place Bullying	Assignment transfer to men	1	17
	Undervaluation of work	1	
	Delegation of work below expertise level	1	
	Constant monitoring of work	1	
	Verbal and non-verbal threats from male	1	
	Inappropriate remarks by male	1	
	No sharing of vital information	1	
	Exclusion from work-group activities	1	
	Denial of request without justified reason	1	
	Receipt of impossible deadline	1	

Broad Title	Theme of the Question	Number of Questions	Total
	Spread of false rumor related to work and behaviour	1	
	Passing of offensive comments	1	
	Signals to resign	1	
	Repeated reminders for same mistake	1	
	Neglect of opinions	1	
	Compulsion to attend meetings etc	1	
	Use of disciplinary procedure to threaten	1	
Turnover Intentions	Thought to leave the organization	1	5
	Search for new employment	1	
	Not likely to stay for rest of the career	1	
	Choose to work in the same organization	1	
	Search for same positions in other organization	1	
Job Peculiarities	Commuting difficulty on distant location	1	5
	Shift system in organization	1	
	Working night-shifts	1	
	Non-Preference for females	1	
	Higher percentage of males	1	
Total Number of Questions			66

(Source: Author's Compilation)

Respondents were asked the demographic questions, they had revealed the response to the same in their interview, but requested not to include in the data analysis, to keep their identity anonymous. Hence, researcher did not disclose the name of the respondents in the analysis. The questionnaire consisting of 66 questions was framed and the same was used for data-collection from the respondents. The copy of the questionnaire is attached as **Annexure-I**. The constructs were measured using the standard scales by reviewing the research work of previous scholars. The items or statements were adapted with respect to the maritime specific sector study. The description of the same is discussed further.

Table 3- 4 Construct Measurement

Construct	Number of Items	Adapted From
Work-Life Balance	7	Mas-Machuca <i>et al.</i> , (2016); Hayman (2005); Brough <i>et al.</i> , (2014);
Training Discrimination	4	Park <i>et al.</i> , (2016); Elacqua <i>et al.</i> , (2009)
Pay and Promotion	6	Park <i>et al.</i> , (2016)
Leave Policies	3	Sterling and Allan, (2019)
Career Development	4	Hwang, (2007)
Work-Place Bullying	17	Ambreen <i>et al.</i> , (2019); Elacqua <i>et al.</i> , (2009)
Turnover Intentions	5	Chan <i>et al.</i> , (2017)
Job Peculiarities	5	Chong and Monroe, (2013)

(Source: Author's Compilation)

All the construct were measured on the Five-point Likert Scale. The items were modified to suit the need of the present study.

3.6.2.2 Interviewing Designing For Women Working In Sea-Based Jobs

A set of questions were prepared to elicit response via interview from women working in sea-based-jobs. The details of the same are discussed further.

Table 3- 5 Interviewing Details Used For Women Working In Sea-Based Jobs

Broad Title	Theme of the Question	Number of Questions	Total
Demographic Details	Name	1	5
	Age	1	
	Marital Status	1	
	Number of Children	1	
	Family Support for course	1	
Maritime Institutes and Female Students	Quality of Training	1	7
	Training Challenges	1	
	Restriction on female students	1	
	Faculty behaviour	1	
	Male batch-mates behaviour	1	
	Campus Placement	1	
	Gender Ratio and Gender Neutrality	1	
Maritime Sector	1	5	

Broad Title	Theme of the Question	Number of Questions	Total
Motivation, Support and Challenges	Awareness about sector	1	
	Support/ Resistance from family	1	
	Life after marriage	1	
	Life after kids	1	
Job Peculiarities	Recruitment and Selection	1	8
	Company Facilities and Policies	1	
	On board male crew behaviour	1	
	Culture/ Mindset	1	
	Gender discrimination/ harassment	1	
	Career Management	1	
	Emotions and Feelings	1	
	Satisfaction Level and personal experience	1	
Policies	Changes to increase in women participation	1	2
	Culture	1	
Total Number of Questions			27

(Source: Author's Compilation)

Respondents were asked the demographic questions, they had revealed the response to the same in their interview, but requested not to include in the transcript or data analysis, to keep their identity anonymous. Hence, researcher did not disclose the name or age of the respondents in the analysis. Response pertaining to marital status, number of children and family support towards the maritime course were intermingled with other points, during the documentation of the response. The broad interview schedule consisting of 27 questions was framed, which is attached as **Annexure-II**.

3.6.2.3 Questionnaire Designing For Recruiters

In order to elicit response from the recruiters with respect to their view on recruiting women in the maritime sector a set of questions were prepared. Recruiters during the interview had revealed the name of the company, but requested not to put in the transcript or data analysis, in order to maintain the anonymity. Human Resource Manager of the organization were reluctant to give away the actual number of women working in the company. The bifurcation of women working in sea-based and non-sea-based jobs was also not revealed. Researcher when conducting the data analysis did not incorporate the details of the company name. Focus on the analysis was on why women were not hired in the maritime sector. The broad interview schedule consisting of 27 questions was framed, which is attached as **Annexure-III**.

The interview schedule is discussed further.

Table 3- 6 Interviewing Details Used For Recruiters

Broad Title	Theme of the Question	Number of Questions	Total
Recruitment Policy	Name of the organization	1	2
	Number of Candidates short-listed	1	
Company Policy For Hiring Female Employees	General male-female ratio	1	4
	Female Panelist	1	
	Gender neutral policies	1	
	Specific training for women	1	
Job-Types/ Sea-Faring Culture/ Male Culture/ Society and Indian Culture/ Gujarati Culture	Gender-wise demarcation of jobs	1	4
	No females for specific job	1	
	Number of females working in sea-based jobs	1	
	Number of females working in non-sea-based jobs	1	

Broad Title	Theme of the Question	Number of Questions	Total
Challenges Specific to Maritime Sector	Barriers for employing women sea-farers	1	1
Availability/Interest	Availability of women for the job	1	1
Lack of Awareness	Changes at entry level for women	1	3
	Compulsion from government or organization to recruit women	1	
	Willingness to hire more females	1	
Challenges	Problems in hiring females	1	1
Performance Satisfaction	Satisfaction on performance of women employees	1	1
Qualities of Females	Positive qualities in women for hiring	1	3
	Regret to hire women in the organization	1	
	Hurdles in recruiting women	1	
Policy Suggestions	Opinion on low-strength of women in maritime sector	1	1
Total Number of Questions			21

(Source: Author's Compilation)

3.6.2.4 Questionnaire Designing For Existing Students

In order to understand the perception of students towards the challenges and opportunities for pursuing the maritime course a structured questionnaire was prepared. The details of the questions asked and the sub-section of each question is discussed in Table 3-7. Very exhaustive survey was conducted with the set of 95 questions in total. The questions consisted of basic demographic details, course details, institute details, course fees, course awareness, nitty-gritty pertaining to their job etc.

Table 3- 7 Questionnaire Details Used For Existing Students

Broad Title	Theme of the Question	Number of Questions	Total
General Section			
Demographic Analysis	Name	1	4
	Age	1	
	Gender	1	
	Educational Qualification	1	
Course Details	Type of Course	1	5
	Semester Pursuing	1	
	Nature of Course	1	
	Stream of School Education	1	
	Stream of College Education	1	
Institute and Course	Institute Details	1	3
	Course Enrollment	1	
	Specialization Selection	1	
Duration and Fees	Course Duration	1	2
	Course Fees	1	
Course Awareness	Mode of Awareness	1	2
	Marine Background	1	
Job Nitty-Gritty	Job Location	1	2
	Job Preference	1	
Section-I Non-Sea-Based Jobs			
Opportunities in Non-Sea-Based Jobs	Niche Specialization	1	15
	High Job Availability	1	
	Handsome Starting Salary	1	
	Placements in Government Job	1	
	100 percent Job placement	1	
	Job Stability	1	
	Easy Job Switching	1	
	Job in Multinational Companies	1	
	Expertise and Job Opportunities	1	
	No Transfers	1	
	Entrepreneurial Scope	1	
	Liking for Shipping Work	1	
	International Trade Exposure	1	
	Career Advancement	1	
	Quick Promotions	1	

Broad Title	Theme of the Question	Number of Questions	Total
Challenges in Non-Sea-Based Jobs	Changing Industry Dynamics	1	13
	Industry Slow-Down	1	
	No Promotions Growth	1	
	Frequent Layoffs	1	
	Lack of Government Support	1	
	Stiff Competition	1	
	Lower Domestic Opportunities	1	
	Distant Job Location	1	
	Lower Salary	1	
	Gender Discrimination	1	
	No Work-Life Balance	1	
	Lack of Marine Courses	1	
	High Investment of Money and Time	1	
Future Expectations in Non-Sea-Based Jobs	Name of Dream Company	1	2
	Expected Salary	1	
Growth in Non-Sea-Based Jobs	Clearance of Specific Exam	1	2
	Appearing for Specific Exam	1	
Section-II Sea-Based Jobs			
Opportunities in Sea-Based Jobs	Variety of Sea-Based Jobs	1	12
	Demand for Maritime Crew	1	
	Early Placement	1	
	Good Starting Pay	1	
	Tax-Free Salary	1	
	Work with Multinational Crew	1	
	Commanding Personnel Fleet	1	
	Sea Adventure	1	
	Long Sea Voyage	1	
	Foreign Country Visit	1	
	Quick Promotions	1	
Defined Career Advancement	1		
Challenges in Sea-Based Jobs	Long Separation	1	29
	Unsettled Life-Style	1	
	Socially Aloof	1	
	Isolation	1	
	Depression	1	
	Problem of Multi-language and Ethnicity	1	

	Rank Discrimination	1	
	Gender Discrimination	1	
	Nation/ Ethnicity Discrimination	1	
	Language Discrimination	1	
	Bullying	1	
	Maritime Piracy	1	
	Stringent Maritime Laws	1	
	Environment Compliance and Criminalization	1	
	Reduction of Shore Leaves	1	
	Competency Issue	1	
	High Accidents Rates	1	
	Work Fatigue	1	
	Extended Working Hours	1	
	Climate and Health Issues	1	
	Body Stress	1	
	Physical Discomfort	1	
	Health Deterioration	1	
	Disturbed Sleep Cycle	1	
	Disorders	1	
	Communicable Diseases		
	Sleep Deprivation	1	
	Sea Sickness	1	
Future Expectations in Non-Sea-Based Jobs	Name of Dream Company	1	2
	Expected Salary	1	
Growth in Non-Sea-Based Jobs	Clearance of Specific Exam	1	2
	Appearing for Specific Exam	1	
Total Number of Questions			95

(Source: Author's Compilation)

The questionnaire was divided in two three sections viz., General Section (which collected basic demographic details and other common details). Section-I consisted of opportunities and challenges perceived by existing students for non-sea-based jobs. If the respondent preferred to pursue the job in non-sea-based maritime sector, then he or she would fill-up Section-I or else he or she moved to Section-II which described, the opportunities and challenges perceived by existing students for sea-based jobs. The details of the questionnaire were discussed further.

As a part of formal etiquettes, the name was asked as a warm-up question, but was not used in the analysis, because it is a string question and has no statistical applicability. The questionnaire consisting of 95 questions was framed, which is attached as **Annexure-IV**.

3.6.2.5 Questionnaire Designing For Alumni

In order to understand the perception of alumni towards the challenges and opportunities towards their jobs after completion of the maritime course. A structured questionnaire was prepared to elicit the response. The questionnaire was divided in two three sections viz., General Section (which collected basic demographic details and other common details). Section-I consisted of opportunities and challenges perceived by alumni for non-sea-based jobs. If the respondent worked in non-sea-based maritime sector, then he or she would fill-up Section-I or else he or she moved to Section-II which described, the opportunities and challenges perceived by alumni for sea-based jobs. The details of the questionnaire were discussed further.

Table 3- 8 Questionnaire Details Used For Alumni

Broad Title	Theme of the Question	Number of Questions	Total
General Section			
Demographic	Name	1	4
	Age	1	
	Gender	1	
	Educational Qualification	1	
Course Details	Type of Course	1	6
	Institute Details	1	
	Course Enrollment	1	
	Specialization Accomplished	1	
	Course Duration	1	
	Year of Passing	1	
Inception of Foremost Job	Mode of Placement	1	6
	Clearance of Specialized Exams	1	
	First Company	1	
	First Designation	1	
	Starting Salary	1	
	Rating of Initial Salary	1	

Broad Title	Theme of the Question	Number of Questions	Total
Details of Present Job	Name of Current Organization	1	6
	Type of Organization	1	
	Job Location	1	
	Present Designation	1	
	Current Yearly Gross Salary	1	
	Current Job Sector	1	
Opportunities in Non-Sea-Based Jobs	Good Scope for Promotion and Career Advancement	1	20
	Good Starting Pay	1	
	Quick Promotions	1	
	Vivid Job Opportunities	1	
	Working with Multinational Companies	1	
	International Trade Exposure	1	
	Ample Job Opportunity	1	
	Easy Job Switch	1	
	Less Transfers	1	
	Employee Friendly Policies	1	
	Knowledge Enrichment	1	
	Well Defined Work and Goals	1	
	Job Stability	1	
	Personal Liking	1	
	Entrepreneurial Scope	1	
	Leave Availability	1	
	Healthy Work Environment	1	
	Well-Defined Increment and Bonus Policies	1	
	Transparent Performance Appraisal	1	
Supportive and Friendly Colleague	1		
Challenges in Non-Sea-Based Jobs	No Quick Promotions	1	23
	Lower Salary	1	
	Gender Discrimination	1	
	Skill Upgradation Issues	1	
	Stiff Competition	1	
	Lower Domestic Opportunity	1	
	Lack of Job Opportunities	1	
	Frequent Job Transfers	1	

	Non-Availability of Specialized Courses	1	
	Salary Discrimination	1	
	Lack of Management's Cooperation	1	
	No Subordinate Cooperation	1	
	No Bottom-Up Feedback	1	
	Distant Location	1	
	Frequent Lay-Offs and Job Instability	1	
	Industry Slow-Down	1	
	Inadequate Government Support	1	
	Lack of Work-Life Balance	1	
	Training Nomination	1	
	Counselling of Employees	1	
	Timely Promotions	1	
	Career Planning	1	
	Transparent Reward System	1	
Sea-Based Jobs			
Opportunities in Sea-Based Jobs	Growing Sector	1	19
	Good Promotion System	1	
	Quick Promotions	1	
	Easy Joining Post Leave	1	
	Quick On-Boarding	1	
	Knowledge Enrichment	1	
	Supportive Crew Members	1	
	Healthy Work Environment	1	
	Transparent Duty and Shift Allocation	1	
	Adequate Shore Leaves	1	
	Liking for Sea Voyage	1	
	Foreign Travel	1	
	Commanding Fleet Personnel	1	
	Multinational Crew Interaction	1	
	Well-Defined Leaves	1	
	Sharing of Law Knowledge	1	
Training Programme Nomination	1		
Good HR Policy and Practice	1		
Different Job Opportunities	1		

Challenges in Sea-Based Jobs	Problem of Multi-language and Ethnicity	1	28
	Rank Discrimination	1	
	Gender Discrimination	1	
	Nation/ Ethnicity Discrimination	1	
	Language Discrimination	1	
	Bullying	1	
	Long Working Hours	1	
	High Accidents Rates	1	
	Physical Discomfort	1	
	Competency Issue	1	
	Reduction of Shore Leaves	1	
	Maritime Piracy	1	
	Stringent Maritime Laws	1	
	Environment Compliance and Criminalization	1	
	Long Separation	1	
	Home-Away	1	
	Socially Aloof	1	
	Isolation	1	
	Climate and Health Issues	1	
	Health Deterioration	1	
	Body Stress	1	
	Disturbed Sleep Cycle	1	
	Disorders	1	
	Communicable Diseases	1	
	Depression	1	
	Sleep Deprivation	1	
	Sea Sickness	1	
	Work Fatigue	1	
Total Number of Questions			112

(Source: Author's Compilation)

As a part of formal etiquettes, the name was asked as a warm-up question, but was not used in the analysis, because it is a string question and has no statistical applicability. The questionnaire consisting of 112 questions was framed, which is attached as **Annexure-V**.

3.6.3 Pilot Testing Of The Questionnaire

Pilot testing involves the testing and administration of the designed instrument on a small group of people from the population under study (Chawla and Sondhi, 2011). Pilot testing is conducted to test the effectiveness of the research instrument. It helps to comprehend if the questions were properly drafted or not, whether the respondents understand the language and communicates what it intends to; are the wordings of the question proper or not, is the question put in the logical flow or not and are the instructions mentioned in the proper way, so that the respondents find it easy to fill the questionnaire (Roopa and Rani, 2012). The pilot testing was conducted for three questionnaire-based survey. The pilot study sample size varies from 12 to 35 (Bell *et al.*, 2018 and Moore *et al.*, 2011). Pretesting is carried out to identify and eliminate the potential problems, its sample size is small, and varies from 15 to 30 respondents (Malhotra and Dash, 2011).

In the case of women working in the non-sea-based sector the pretesting of the questionnaire was carried out on 20 samples. With respect to the questionnaire of existing students and alumni the pretesting was conducted on a sample of 12 respondents. Once the data was received from the pilot study, the reliability testing was carried out.

3.6.4 Reliability Testing Of The Questionnaire

Reliability is concerned with consistency, accuracy and predictability of the scale. It refers to the extent to which a measurement process is free from random errors (Malhotra and Dash, 2011). It refers to the extent to which as scale produces consistent results if repeated measurements are made (Chawla and Sondhi, 2011). The assurance of consistent results is the fundamental motive of reliability testing (Roopa and Rani, 2012). Internal consistency reliability is an approach for assessign the internal consistency of the set of items when several items are summated in order to form a total score for the scale (Chawla and Sondhi, 2011). Coefficient Alpha popularly known as Cronbach's Alpha is a measure of internal consistency reliability that is the average of all possible split-half coefficients resulting from different splittings of the scale items. For the questionnaire based survey the Cronbach's Alpha was computed. If the value ranged between $0.60 \leq \alpha \leq 0.70$, it implies that there is a fair reliability between the various items of a multiple item scale. The alpha value between 0.70 to 0.80 is referred as 'Good' and between 0.80 to 0.95 is treated as 'Very-Good'. Alpha value of one indicates complete consistency. The details of the Cronbach Aplha pertaining to the three questionnarie is discussed further.

Table 3- 9 Details Of Reliability Statistics

Study Part of the Questionnaire	Construct	Number of Items in the Construct	Cronbach's Alpha
Women Working in Non-Sea-Based Jobs	Work-Life Balance	7	0.87
	Training Discrimination	3	0.60
	Pay and Promotion	6	0.81
	Leave Policies*	3	0.64
	Career Development	4	0.78
	Work-Place Bullying	17	0.96
	Turnover Intentions	5	0.72
	Job Peculiarities	5	0.70
Existing Students	Opportunities in Non-Sea-Based Jobs	15	0.74
	Challenges in Non-Sea-Based Jobs	13	0.76
	Opportunities in Sea-Based Jobs	12	0.68
	Challenges in Sea-Based Jobs	28	0.89
Alumni	Opportunities in Non-Sea-Based Jobs	20	0.91
	Challenges in Non-Sea-Based Jobs	23	0.87
	Opportunities in Sea-Based Jobs	19	0.86
	Challenges in Sea-Based Jobs	28	0.87

(Source: Author's Compilation)

Only with respect to leave policies, the construct was measured using four items, but when the reliability computation was less than 0.6, one of the items was dropped. Eventually, the leave policies construct was measured using just three items. It may be observed that all the construct surpassed the test of reliability, i.e. the benchmark of either equal to 0.6 or more. Post-reliability the validity of the questionnaire was also checked, which is discussed further.

3.6.5 Validity Of The Questionnaire

Validity of a scale refers to the question whether we are measuring what we are measuring what we want to measure (Chawla and Sondhi, 2011; Malhotra and Dash, 2011; and Roopa and Rani, 2012). There are different ways to measure the validity. Content validity refers to the extent to

which a tool i.e. the questionnaire, represents all aspects of a given concept. Expert judgement is often used to determine whether a test/tool have a content validity (Roopa and Rani, 2012). With respect to the present study, all the five questionnaires were shared with the Doctoral Progress Committee (DPC) members appointed by Gujarat Technological University (GTU) for facilitating the researcher. The DPC members are expert and experienced in the field of human resource, who assisted the researcher in determining the content validity of the questionnaire.

Face validity is an estimate whether the item of a questionnaire seems to be appropriate i.e. at face value are they getting the response in a way the researcher aims to measure. Face validity for the questionnaire was conducted using interview or probe method with at least five respondents who had participated in the pretesting of the questionnaire. With those respondents the researcher had a detailed discussion regarding each item, in order to check their understanding about each question. Suggestions from the selected respondents were incorporated in the final format of the questionnaire (Roopa and Rani, 2012). For all the five questionnaires the face validity was assessed through interview method.

Sensitivity of a scale is an important measurement concept, particularly when changes in attitudes are under investigation. Sensitivity of the instrument helps to accurately measure the variability in a concept. Instead of just putting the dichotomous response category such as agree or disagree may not allow the recording of any attitude changes. The higher the response point, higher the sensitivity. With respect to the three questionnaires, which aimed to study the challenges faced by women working in non-sea-based jobs and challenges and opportunities perceived by existing students and alumni, sensitivity towards the attitudinal scale was increased by adding more categories on the scale. Thus, a more sensitive measure with numerous categories on the scale was added to seek the proper response on attitude-based question.

Post-pretesting of the questionnaires and after necessary modifications, when the reliability and validity of the tool was established, questionnaire was ready for conducting the full-fledged survey.

3.7 Research Approach

Research approach refers to the plans and the procedures for research that initiates from the steps of broad assumptions, to detailed methods of data collection, analysis and interpretation. (Creswell and Creswell, 2017).

For women working in non-sea-based jobs, existing students and alumni, a structured questionnaire was given to a sample of a population and it was designed to elicit specific information from the

respondents, such a process is referred as survey (Chawla and Sondhi, 2011). The questioning was structured, in the survey, i.e. there was a degree of standardization imposed on the data collection process. In the structured data collection, the use of a formal questionnaire that presented questions in a pre-arranged order, was adopted. The approach of research was direct and non-disguised i.e. the purpose of the research had been disclosed to the respondents. The method to reach the target respondents was mail questions wherein the written surveys were sent through the mail to the selected members of the population to be surveyed. This method helped to collect the information at low cost and briskly (Roopa and Rani, 2012). This method may be also called as mail interviews (Chawla and Sondhi, 2011). The technique of administering the survey may be referred as Self-Administered Questionnaire, wherein the respondents had to fill-out the questionnaire themselves. This method of filling the questionnaire proved to be time-saving, as the respondent would fill-up the questionnaire at his or her convenient time i.e. the interviewer need not to visit or circulate mail on a specific time and this method allowed the respondent to maintain his or her anonymity and also he or she might reconsider his or her response (Sukamolson, n.d.). For getting more clarity post-mail questions, the researcher had adopted in few cases a telephone interviewing technique in which traditional telephone interview of the respondent was taken by asking them only those questions in which the researcher wished to get more insights. The researcher on a piece of paper wrote the response with a pencil and collated the same during the data analysis (Malhotra and Dash, 2011).

Google forms a free online survey platform was used for circulating the questionnaire via email. The questionnaire was converted into online form, using personal computer which had Windows 19 operating system. The Google Form Software or website, used the minimum configuration of the computer and it was relatively less time-consuming, required less manpower and involved less expense when compared with offline platform (Mondal *et al.*, 2018). The tool is freely available, automatic recording of response in the spreadsheet facilitates data collection and also makes analysis easy (Narayanaswamy and Harinarayana, 2016). For the researcher, the Google Form, turned out to be a boon to easily collect data during tough COVID times. With respect to the data collection from women working in non-sea-based jobs in maritime sector, existing students and alumni, the respondents were contacted by sending the google form link via email. It was ensured that 'required option' (a facility provided in the Google Form) was activated while preparing the Google Form (Online Questionnaire) for close-ended question, so that respondent compulsorily

filled the response (and not skip) to the question, before submitting the form. The required option was not activated for the qualitative questions only.

Individual interview is the most popular method of data collection in the qualitative research. The face-to-face interview is carried out between the researcher and the interviewee with a specific structure and purpose. The conversation aimed to elicit a detailed information from the interviewee. This method may be either formal or informal and helps to collect personalized information from the participants. The researcher may easily ask follow-up questions to gain deeper insights on the issue being discussed (QuestionPro, n.d.). Direct (non-disguised) method of depth interviews was used for collecting data from women working in sea-based jobs and recruiters. The electronic interviewing method was adopted for availing response from the women working in sea-based jobs and recruiters. The researcher was able to able to conduct the interview, without the physical human interruptions (except the technical glitch at times in very few cases), it helped to reduce the time and cost; was very convenient and the medium removed the importance of geographic location. It also helped in non-interfering recording and proper transcription and it helped the researcher to continue the process till the researcher was satisfied in seeking the answers and reached a saturation point (Persichitte *et al.*, n.d.). During the pandemic time, when one-to-one or face-to-face meeting is not possible, the best alternative to connect with the respondents was through Google Meet or Cisco Webex (Purwanto and Tannady, 2020). The recruiters and women working in sea-based jobs were contacted by sharing the Google Meet or Cisco Webex meeting link via email.

3.8 Sampling Design

Sampling refers to the process of selecting the right individuals, objects or events for the study. In other words, it is the process of selecting the samples from the population. It involves the study of a small number of individuals, objects, chosen from a larger group (Chawla and Sondhi, 2011). The sampling design provides the roadmap of how to select the sample. The points discussed further are population, sampling unit, sampling procedure, sampling technique, sample size, sample size determination, sampling area and sampling duration.

3.8.1 Population

Population refers to any group of people or objects that form the subject of study in a particular survey and are similar in one or more ways (Chawla and Sondhi, 2011). The population of the present study consist of five parts, which are discussed further:

Women Working in Non-Sea-Based Jobs and Sea-Based Jobs in Maritime Sector: The women working in the maritime sector in the non-sea-based jobs and also the sea-based jobs, of Gujarat State, constituted the population of the study. The total strength of the employees working on permanent and contractual basis was shared by the organizations, which is depicted in Table 3-10.

Table 3- 10 Population Number Of Total Number Of Employees

Sr.No	Name Of Organization	Total Employee Strength Including Contractual
Bharuch Port		
1	Adani Petronet Port Pvt Ltd	185
2	Shoft Shipyard Pvt Ltd	160
3	Gujarat Chemical Port Terminal Company Ltd	126
4	Petronet Lng Ltd. Dahej	583
Magdalla Port - Surat		
1	Adani Hazira Port Pvt Ltd	481
2	Ultratech Cement Ltd	220
3	Ambuja Cement Ltd (Unit-Magdalla,Surat)	200
Jamnagar Port		
1	M/S Shreeji Shipping	1100
2	M/S Siddhi Marine Service	75
3	M/S Krishnaraj Shipping Co.Limited	39
Mandvi/Mundra Port		
1	Ultratech Cement Ltd. GCW, Kovaya Tal.Rajula Dist Amreli	1025
2	Sanghi Industries Ltd	800
Jafrabad Port		
1	NCCL GMB Jetty	713
2	Gujarat Pipavav Port Ltd	1500
TOTAL		7207

(Source: Compiled from the Organization's Shared Database)

The researcher had requested to share the details not only of the females working in their organization but also requested to share the sea-farers and non-sea-farers details too. The organizations were reluctant to share the exact number of female employees working with them in last one year. When the researcher took the recruiters interview, it was tried to find the number of women employees working in their company or in the entire maritime sector. Verbally, the Human Resource Managers conveyed that the employment of women in the maritime industry would be just four to five percent. The percentage shared by the managers of different companies were more

or less the same. Thus, to define the population, researcher assumed that the population of the women working in the maritime sector may be five percent. The distinction of women working in the non-sea-based jobs and sea-based jobs was not availed. Considering the total population of people working in the maritime sector as 7,207, five percent of the same was assumed to be the population size of women working in the maritime sector, i.e. 360. Unfortunately, as the exact number of women working in this particular domain was not shared by the recruiters and, so researcher had to rely on personal contacts and references for contacting the respondents.

Recruiters: The Human Resource Managers working in the maritime sector, constituted as the population for the study. The companies employing more than 100 employees and which were working in the maritime sector, was the main part of the population. Ten such companies were identified for the study.

Existing Students: The population consisted of last two years students who had recently completed their course or who were about to complete their course. It is often believed that the student who recently pass-out from the college, tend to be strongly associated with the institute at least for some time, as the time grows, the students take a back-seat to keep-in-touch with the institute. For more availability of the numbers, the recent passed-out students were not treated as alumni, but were considered as recent or existing students for the purpose of sampling. The institute were asked to provide the data of students with respect to the recent batch and the previous batch, for the purpose of sampling. It was observed that institute had a sanction intake number, which was not considered for defining the population. On the existing intake capacity, how many seats were filled was taken into consideration for defining the population. The data of the same is shown in the Table 3-11.

Table 3- 11 Population Numbers Of Existing Students

Name of the Institute	Batch Year	Number of Students Admitted
B.K. School of Business Management (now- B.K. School of Professional Studies)	2018-2020	56
	2019-2021	62
Ganpat University (Marine Course)	2018-2022	16
	2019-2023	26
Gujarat Maritime University (Newly Started)	2019-2021	4
Total Population		164

(Source: Compiled from the Institute's Shared Database)

It may be observed that the total population consisted of 164 students, considering all three-premier institute of Gujarat.

Alumni: The researcher requested to educational institute to share the details on the number of alumni who left the institute from the year 2017 and way back. It was clarified that the data may be based on the actual students who studied and had completed their course and not on the intake capacity of the institute. The data of the same is shown in the Table 3-12.

Table 3- 12 Population Numbers Of Alumni

Name of the Institute	Batch Year	Number of Pass-Out Students
B.K. School of Business Management (now- B.K. School of Professional Studies)	2007-2009	22
	2008-2010	31
	2009-2010	31
	2010-2012	38
	2011-2013	45
	2012-2014	46
	2013-2015	46
	2014-2016	32
	2015-2017	32
	2016-2018	45
	2017-2019	42
Ganpat University (Marine Course)	2012-2016	19
	2013-2017	37
	2014-2018	32
	2015-2019	24
	2016-2020	21
	2017-2021	18
Gujarat Maritime University (Newly Started)	2018-2020	2
Total Population		563

(Source: Compiled from the Institute's Shared Database)

It may be observed that the total population consisted of 164 students, considering all three-premier institute of Gujarat.

3.8.2 Sampling Element And Sampling Unit

Sampling element is an object that possesses the information sought by the researcher. It is an object from which the information is desired. In the survey research, the element is usually the respondent (Malhotra and Dash, 2011). Sampling unit is a single member of the sample (Chawla and Sondhi, 2011). The basic unit containing the elements of the population to be sampled is called

sampling unit (Malhotra and Dash, 2011). Sampling unit is an individual person (DJS, n.d.). Many a times the sampling element and sampling unit may be the same (Malhotra and Dash, 2011). The sampling unit must be defined concretely as a part of the base-work for the statistical study and also it is a main pillar of the data-set (Daniel, 2011). It all depends on how the researcher had approached for filling up the questionnaire. If the researcher had sampled the organization or households, it would be called as sampling unit. If the researcher had directly sampled the respondent for data collection, then in such a case the sampling element and sampling unit would be the same.

In the present study of working women (sea-based jobs and non-sea-based jobs) the sampling unit were the companies or organization in which the women were working or Human Resource Managers were performing their duties. With respect to the study of existing students and alumni the maritime institute was considered as the sampling unit. The women were the sampling element with respect to study of non-sea-based jobs and sea-based jobs. The Human Resource Managers were the sampling element for the study of recruiters. The male and female students were the sampling element for the existing students and alumni study.

3.8.3 Sampling Procedure

There are two types of sampling design- namely probability sampling design, in which each and every element of the population has a known chance of being selected in the sample (Chawla & Sondhi, 2011). Sampling frame is a must in probability sampling (Acharya *et al.*, 2013). In the case of non-probability sampling design, the elements of the population do not have any known chance of being selected in the sample. The non-probability sampling procedure was adopted for all the five parts of the study.

3.8.4 Sampling Technique

As stated earlier, the Non-Probability sampling procedure was adopted for the study. When an incomplete list of population is available, the researchers tend to use the non-probability sampling procedure. Under the non-probability sampling, there are different methods. In the snowball sampling method, respondents are asked to suggest more respondents (Ayhan, 2011). Snowball sampling is generally used when it is difficult to identify the members of the desired population (Chawla and Sondhi, 2011). Expert choice is a form of purposive or judgemental sampling which is used to pick up the “representative”. The researcher had treated the HR managers as experts, who directed him to the women working in the sea-based jobs for carrying out the survey. This is done so that the expert assists in picking up the correct representative. Judgemental sampling design is

used when the required information is possessed by a limited number or category of people (Chawla and Sondhi, 2011). Also in the case of existing students and alumni the questionnaire link was forwarded to the HODs of the maritime institute and they were treated as experts by the researcher, who assisted in the research. The HODs were the best judge and they used their discretion to forward the link to the existing students and alumni.

For the survey of women working in non-sea-based jobs and sea-based jobs, snowball sampling cum expert choice of judgemental sampling technique was adopted. For the recruiters study it was snowball sampling method. For the existing students and the alumni the sampling technique adopted was expert choice or judgemental sampling.

3.8.5 Sample Size

The sample size refers to the number of elements to be included in the study (Chawla and Sondhi, 2011). Determining the sample size is a complex and involves several qualitative and quantitative factors. For the exploratory research designs, which uses qualitative research, the sample size is typically small. For conclusive research, such as descriptive surveys, larger samples are required (Malhotra and Dash, 2011). The sample size in the present study are as under:

Women Working in Non-Sea-Based Jobs: 211

Women Working in Sea-Based Jobs: 8

Recruiters: 8

Existing Students: 127

Alumni: 63

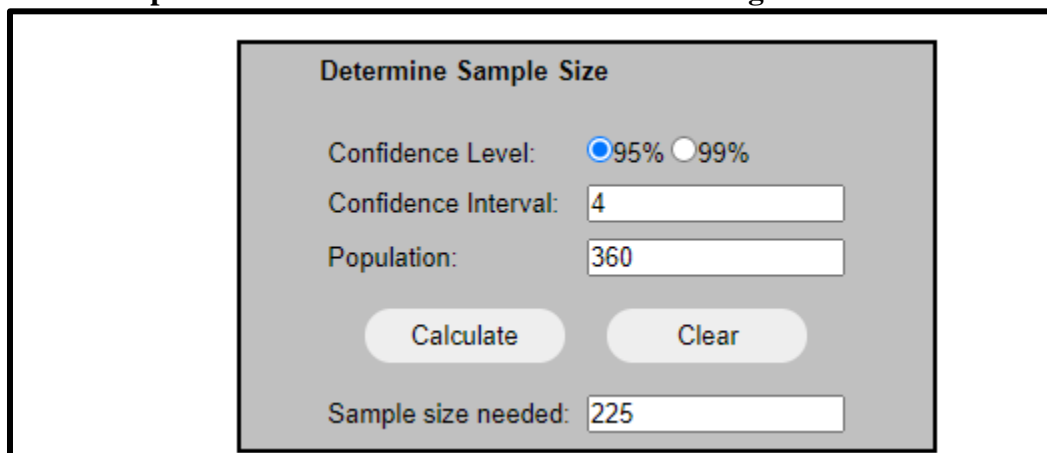
3.8.6 Sample Size Determination

The most common approach to determine the sample size is the confidence interval approach covered under inferential statistics (Chawla and Sondhi, 2011). With the advent of internet, one can estimate the sample size using the sample-size calculator instead of manual calculation. In order to use the sample size calculator, the terms like confidence level, confidence interval and population needs to be understood. The confidence interval is often called as margin of error, it is usually the plus or minus figure reported in the opinion. It is the range into which the true population parameter will fall, assuming a given level of confidence (Malhotra and Dash, 2011). The wider the confidence interval, one is willing to accept, the more certain one is that the whole population answers be within that range. Confidence level tells one how sure one can be. It is expressed as a percentage and represents how often the true percentage of the population who

would pick up an answer within the confidence interval. The 95% confidence level means one is 95% certain. Most researchers use the 95% confidence level (Creative Research Systems, n.d.).

Women Working in Non-Sea-Based Jobs: As the population was known, the online sample size Calculator available on Survey System was used to compute the sample size. Confidence Level was kept at 95% and Confidence Interval was taken at four percent. The population size of 360 was fed in the calculator and finally the sample size turned out to be 225. The result of the same is displayed in Figure3-2. The researcher had targeted to fill 225 questionnaire, by sending the link via email of the Google Forms (Online Questionnaire link). The questionnaire link was sent to the known respondents, and it was requested to circulate amongst their colleagues and female friends who were working the maritime sector. Necessary, timely follow-up was done to get the questionnaire filled. After a lot of persuasion, the final number of questionnaires that were filled were 211. The response rate was just 94% with the final sample size of 211.

Figure 3- 2 Sample Size Determination For Women Working In Non-Sea-Based Jobs



The image shows a screenshot of a web-based calculator titled "Determine Sample Size". It features the following elements:

- Confidence Level:** Two radio buttons are present, with "95%" selected and "99%" unselected.
- Confidence Interval:** A text input field containing the number "4".
- Population:** A text input field containing the number "360".
- Buttons:** Two rounded rectangular buttons labeled "Calculate" and "Clear".
- Output:** A text input field at the bottom labeled "Sample size needed:" containing the number "225".

(Source: Survey Systems Calculator)

Women Working in Sea-Based Jobs: The sample size of Eight females was decided based on the guidance of the HR managers. As it was an exploratory study, the lower sample size was sufficient to address the research work. (Malhotra and Dash, 2011)

Recruiters: The researcher tried to approach the HR managers of all ten companies, but companies or organization, but the respondents were reluctant to share any information. With great difficulty, the sample size of Eight recruiters was finalized for the study. The HR managers were convinced that the data was for academic purpose only and their identity as well as the name of their

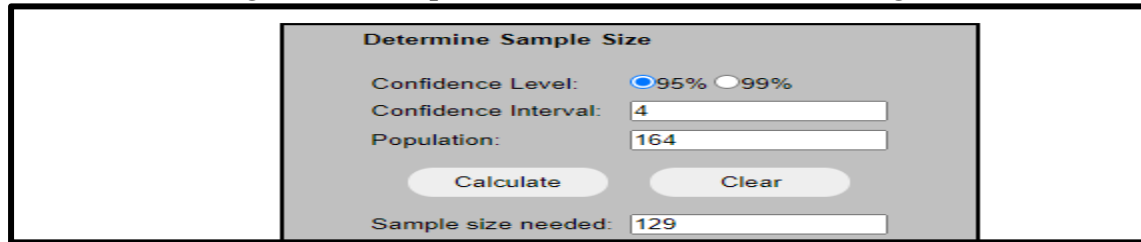
organization would be disclosed anywhere in the thesis. As it was an exploratory study, the lower sample size was sufficient to address the research work (Malhotra and Dash, 2011).

Existing Students: As the population was known, the online sample size Calculator available on Survey System was used to compute the sample size. Confidence Level was kept at 95% and Confidence Interval was taken at four percent. The population size of 164 was fed in the calculator and finally the sample size turned out to be 129. The result of the same is displayed in Figure3-3. The researcher had targeted to fill around 130 questionnaire, by sending the link via email of the Google Forms (Online Questionnaire link). The questionnaire link was not directly sent to the respondents, but it was sent to the Head of the Department (HOD) of the institute and he was requested to assist the researcher in the data collection. The HOD of the maritime institute, through his official email-id he had circulated the questionnaire link, and asked the students to compulsorily fill the questionnaire as a result, the response rate was as high as 98% with the final sample size of 127.

Alumni: As the population was known, the online sample size Calculator available on Survey System was used to compute the sample size. Confidence Level was kept at 95% and Confidence Interval was taken at nine percent. The HOD had suggested to keep an approximate sample size of 100, because the alumni once leaves the college, its difficult to trace them and get the updated communication details. Considering this the researcher kept the higher confidence interval level to attain the sample size of approximately 100. The population size of 563 was fed in the calculator and finally the sample size turned out to be 98. The result of the same is displayed in Figure3-4. The researcher had targeted to fill around 100 questionnaire, by sending the link via email of the Google Forms (Online Questionnaire link). The questionnaire link was not directly sent to the respondents, but it was sent to the Head of the Department of the Institute and he was requested to assist the researcher in the data collection. The HOD of the maritime institute, through his official email-id he had circulated the questionnaire link, and requested the alumni to fill the questionnaire. The researcher had a discussion with the HOD of the maritime institute, it was learnt that many of the emails had bounced back may be because the alumni might not be accessing the general email-id and would be more active on the official email-id of the organization in which they were presently working. The other reason cited were, may be the alumni might not have time to fill the questionnaire or may be they might not bother to do so. Thus, either due to the inactiveness on the

old email-id or no willingness to participate in the survey, the response rate was just 64% with the final sample size of 63.

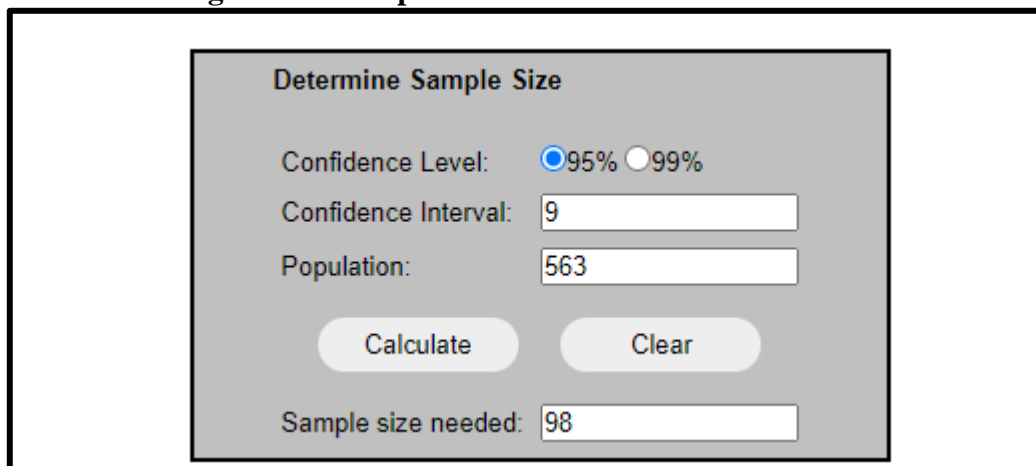
Figure 3- 3 Sample Size Determination For Existing Students



The screenshot shows a web-based calculator titled "Determine Sample Size". It features the following elements: "Confidence Level" with radio buttons for 95% (selected) and 99%; "Confidence Interval" with a text input field containing the value 4; "Population" with a text input field containing the value 164; two buttons labeled "Calculate" and "Clear"; and a "Sample size needed" field at the bottom containing the value 129.

(Source: Survey Systems Calculator)

Figure 3- 4 Sample Size Determination For Alumni



The screenshot shows a web-based calculator titled "Determine Sample Size". It features the following elements: "Confidence Level" with radio buttons for 95% (selected) and 99%; "Confidence Interval" with a text input field containing the value 9; "Population" with a text input field containing the value 563; two buttons labeled "Calculate" and "Clear"; and a "Sample size needed" field at the bottom containing the value 98.

(Source: Survey Systems Calculator)

3.8.7 Sampling Area

The study of women working in non-sea-based jobs were conducted in the major districts of Gujarat such as Ahmedabad, Amreli, Bharuch, Bhavnagar, Devbhoomi Dwarka, Gandhinagar, Jamnagar, Kutch, Morbi (and Mundra/Mandvi) and Surat. Thus, ten districts were approached for the study. These districts are near to the major ports located in Gujarat. The head office of Gujarat Maritime Board (GMB) is in Gandhinagar, so that location is chosen. Education institutes which are run by companies operating in maritime sector were also taken for study, because in such institute the women were working and the nature of their job was non-sea-based. The recruiters in the study consisted of Human Resource (HR) Managers of companies based in Jamnagar, Mundra, Surat, Bharuch and Ahmedabad. These companies were actively engaged in the maritime sector. The survey of existing students and alumni were conducted in cities like Ahmedabad, Gandhinagar and Mehsana. These cities were chosen because, the maritime course was run only in B.K. School

of Business Management, Ahmedabad (now B.K. School of Professional Studies); Gujarat Maritime University, Gandhinagar and Ganpat University, Mehsana. Thus, at Gujarat level only three institutes were offering the maritime course and it was considered in the study. The newest amongst the three institute is Gujarat Maritime University.

3.8.8 Sampling Duration

It refers to the time period under consideration for conducting the survey. The duration for the doctoral research work was four years. The researcher post-exhaustive literature review had carried out the survey and interview part of the study. The duration of conducting the study is as under.

Women Working in Non-Sea-Based Jobs: It was started on 1st June, 2020 to 31st August, 2020.

Women Working in Sea-Based Jobs: It was commenced on 1st September, 2020 till 30th October, 2020.

Recruiters: It was initiated on 1st November, 2020 upto 31st December, 2020.

Existing Students: It was carried out from 1st May, 2020 to 31st August, 2020.

Alumni: It was conducted from 1st January, 2021 to 30th April, 2021.

3.9 Data Processing

It mainly includes fieldwork validation, data editing, data coding, data classification, data tabulation and exploratory data analysis. This process starts once the data collection from the field is finished.

3.9.1 Fieldwork Validation

The researcher ensures that the questionnaires are properly filled post-survey (Chawla and Sondhi, 2011). In the present study the questionnaire was filled through online mode via Google forms. So, the first step was to download the Excel spreadsheet and then check out for the accuracy post-survey. The care was taken while framing the questionnaire that response to the question was by default marked under 'Required' field, in other words, the respondent had to mandatorily answer the question, then only he could submit the form. Thus, problem of missing data was addressed before hand. The responses were checked for same liners, meaning to say, if the respondent had chosen same value for all questions. Fortunately, such cases were not there in the survey.

With respect to the qualitative data, the recorded interview was retrieved and in the first instance, it was thoroughly heard. It was ensured by the researcher that response to all the questions were received. At the second attempt the interview was transcript in the dialogue format.

3.9.2 Data Editing

Centralized in-house editing was carried out of the data (Chawla and Sondhi, 2011). The problem of value more than 5, was noted in the Likert-type questions, because the entire spread-sheet contained the information the string format and not the numeric format. The spread-sheet data was exported to Statistical Package for Social Sciences (SPSS 17) version.

For the exploratory data it was ensured that the interview transcript was in the exact verbatim. Care was taken to ensure that the verbatim, if in vernacular language is also written in the same way, so that the meaning of the information is not diluted or changed.

3.9.3 Data Coding

Coding refers to assigning numbers or numeral value to the response is called coding. The spread-sheet data had response in text format or string format, the same were transformed into meaningful number for proper statistical analysis (Chawla and Sondhi, 2011). Appropriate coding system was adopted. The response to the dichotomous question was coded as 1 and 2. The response for multiple choice question was coded starting from 1 and onwards. The five-point Likert scale-based question was coded as 1= Strongly Disagree and up to 5= Strongly Agree. The not applicable questions were coded as 0. The missing value for not applicable question was defined as 0, so that the descriptive analysis gave correct answer. The answers to the open-ended question were pasted separately in the word document, by properly mentioning the respondent number in one column and the answer given by him or her to the question in a separate column. The text answers were separately pasted in the different column. Utmost care was taken in the first place so that in case of future reference, the records were up-to-date for verification. Irrelevant answers to the questions were highlighted, a care was taken that such answers were not included in the analysis. At the first place the variable view was created in the SPSS and necessary value-labels were defined, based on the coding discussed before. The same codes were replaced for the string answers and then then numeral coded, string response were pasted in the data-view of the SPSS. For the variable view of every question, the appropriate scale was chosen. For instance, the nominal scale was chosen for dichotomous and multiple-choice question. For the likert-type question, scale measure was chosen. For answers which were in text, the characters length was extended and string function was chosen to accommodate the content, first in the SPSS file and later it was pasted in the word document. With respect to the interview-based research, the interwoven answers were separated under proper head. Thus, a broad theme was created for easy identification. The broad theme was defined in the

proper context and irrelevant answers were highlighted and a care was taken that the same was not included in the analysis.

3.9.4 Data Classification

Reducing the information into homogenous categories on the basis of structured question is called classification of data (Chawla and Sondhi, 2011). In the present study as majority of the questions were close-ended, the classification was done before-hand. Re-classification was not needed. Only for testing the proportions in the inferential statistics, the data was recoded into different variable in SPSS and transformed to dichotomous variable from the five point Likert type question. With respect to the qualitative data based on the theme, the short codes were framed to provide more analysis to the data.

3.9.5 Data Tabulation

Tabulation involves an orderly arrangement of data into an array that is suitable for statistical analysis. Frequency count was computed using either Excel or SPSS for the question and the same was tabulated in the study. A simple cross-tabulation or a layered cross-tabulation, was also conducted in the SPSS to draw a meaningful insight from the data.

Through the manual understanding, an attempt was made to identify the similarity within the response shared by the respondents and later the same textual data was counted to arrive at some meaningful frequency count.

3.9.6 Exploratory Data Analysis

Preliminary data exploration is done to assess the expected trends of the findings (Chawla and Sondhi, 2011). Bar chart and pie-charts were prepared to identify the trend in the data, collected from the close-ended questions. The graphs were prepared initially for the quick data-check. Once the researcher was sure of the data set, all different types of graphs were not used for data analysis. Only some of the bar-charts and pie-charts were used as a pictorial representation of the data.

With respect to the qualitative study, such open-ended check was not adopted. Only the logical ordering of the sub-theme, its explanation and proper usage of codes was rechecked for crystal clarity.

3.9.7 Usage Of Statistical Software Packages

The quantitative data was managed in Microsoft Excel and also in SPSS software. Excel spreadsheets were used for coding and decoding of the data. Various charts or graphs were prepared in excel. The data was exported from excel to SPSS. SPSS was used for computation of descriptive

statistics and inferential statistics. The Microsoft word was also used for managing the qualitative data. The virtual field notes which were documented on a physical paper, during online interview, were also transferred to the word document. The transcript was typed in word-document. The code and quote analysis of both the interviews were also managed in the word-document. Entire research work was finally well-documented in the form of a report in the word document.

3.10 Data Analysis Plan

The raw data collected from the primary sources, are analyzed to draw logical conclusion (Chawla and Sondhi, 2011). The researcher had applied univariate, bivariate and multivariate statistics to analyze the data. Data analysis helps in useful information discovery (Francis, 2020). The purpose of data analysis is to organize, interpret, structure and present the data so that useful information is derived at a cursory glance. The data is analyzed using the descriptive and inferential statistics (GetSmarter, 2017). The data analysis adopted in the present study is discussed further.

3.10.1 Univariate, Bivariate And Multivariate Analysis Of Data

The primary data collected from the field was analyzed using the univariate analysis, bivariate analysis and multivariate analysis. When one variable is analyzed at a time, it refers to the univariate analysis. When two variables are analyzed together and any possible association between them is examined, it refers to the bivariate analysis. In the multivariate analysis, more than two variables are analyzed at a time (Chawla and Sondhi, 2011). Univariate analysis was performed on all questionnaire-based research. For all the four types of scale univariate analysis was conducted. At some places graphs like pie-chart and bar-charts were also used for the analysis of the data. Pie-charts were used as a percentage associated with the value of a specific variable. Bar-charts either positioned horizontally or vertically were used to present the change (Malhotra and Dash, 2011). In order to draw more insights, the cross-tabulation technique was adopted for bivariate analysis. For some of the questions, the cross-tabulations were layered with the third variable. To draw the meaningful inference the multivariate technique of data analysis was adopted. For qualitative based research only, univariate statistics was applied.

3.10.2 Descriptive Analysis Of The Data

Descriptive analysis deals with summary measures relating to the sample data. It helps to transform the raw data into a form that will facilitate easy understanding and interpretation. The type of descriptive analysis to be carried out depends on the measurement of variables (Chawla and Sondhi, 2011). Measures of Central Tendency such as Mean, Median and Mode were used for

descriptive data analysis. It helps to locate the centre of the distribution. Measures of Dispersion such as Standard Deviation and Range (difference between Maximum and Minimum) was also used in the analysis. Its spread of the distribution of a variable is known through the measures of dispersion (Chawla and Sondhi, 2011). On the nominal scale the frequency count or frequency table was computed. Percentage or mode was also used for describing the nominal scale-based data. Composite mean was computed in the data-analysis of alumni. For ordinal scale data, median was computed for better understanding. Mean and Standard-deviation was calculated for the interval scale measurement. On the ratio scale of measurement, mean, median, mode, standard-deviation, minimum and maximum were calculated.

Analysis of the multiple-choice question, which had multiple-responses were analyzed for one category of the response i.e., either positive or negative. In other words, the responses were analyzed and not the cases. Apart from univariate statistics, the bivariate analysis was conducted through cross-tabulation. Cross-tabulation was carried out for women working in non-sea-based jobs, existing students and alumni.

3.10.3 Inferential Analysis Of The Data

In an inferential analysis, inferences are drawn on population parameters based on sample results. The researcher tries to generalize the results to the population based on sample results. Before deciding the choice of parametric versus non-parametric test, the researcher tried to check-out the normality of the data. The Kolmogorov-Smirnova Test and Shapiro-Wilk test was run to check-out the normality. As the sample size of the three questionnaires under study was more than 50, Kolmogorov-Smirnova Test was more suitable. It was concluded that the collected data was not normal and hence the non-parametric test was applied for further analysis. Non-parametric test is applied when the normality assumptions are not met, data is collected either on ordinal or interval scale and it can also be applied to small sample size. No inferential analysis was applied on the textual data collected through interview. Factor analysis is a multivariate analysis and it is applied to reduce the large number of variables into fewer number of factors (Malhotra and Dash, 2011). The factor analysis exercise requires metric data, which should be either interval or ratio scale in nature. It is free from the normality assumptions (Chawla and Sondhi, 2011; Stack Exchange, n.d.). Considering this rule the factor-analysis was applied on the data. One-Way Chi-Square Test was applied on the categorical data, to determine if the difference between the observed data and the expected data was due to chance or it is due to the relationship between the study variables

(University of Southampton, n.d.). The Two-Way Chi-Square Test was applied to check the relationship between two categorical variables. The test of such independence assessed whether an association existed between two variables by comparing the observed pattern of response to the pattern that would be expected if the variables were truly independent of each other (Complete Dissertation, n.d.). The Fisher's Exact Test checks the independence between two categorical variables, especially, when more than 20% of cells have the expected frequency count less than five (Kim, 2017). Mann-Whitney U Test was applied to compare the differences between two independent groups when the dependent variable was ordinal and not normally distributed (Laerd Statistics, n.d.). The Spearman's Rank Correlation Test was used to measure the strength between the two ranked variables (Laerd Statistics , n.d.).

3.11 Hypothesis Framed

A hypothesis is an assumption or a statement that may or may not be true. The hypothesis is tested on the basis of information obtained from a sample. There are two parts to the hypothesis. The null hypothesis is proposed with the intent of receiving a rejection and it is denoted by H_0 . The alternative hypothesis can cover a whole range of value rather than a single point. It is denoted by H_1 . The details of the hypothesis framed is discussed in Table 3-13.

Table 3- 13 Hypothesis Framed

Variables Used	Null Hypothesis	Test Administered
Study on Women Working in Non-Sea Based Jobs		
Work-Life Balance	H_{01} : Data is normal	Kolmogorov-Smirnova Test
Training Discrimination	H_{02} : Data is normal	Kolmogorov-Smirnova Test
Pay And Promotion	H_{03} : Data is normal	Kolmogorov-Smirnova Test
Leave Policies	H_{04} : Data is normal	Kolmogorov-Smirnova Test
Career Development	H_{05} : Data is normal	Kolmogorov-Smirnova Test
Work-Place Bullying	H_{06} : Data is normal	Kolmogorov-Smirnova Test
Turnover Intentions	H_{07} : Data is normal	Kolmogorov-Smirnova Test
Job Peculiarities	H_{08} : Data is normal	Kolmogorov-Smirnova Test

Variables Used	Null Hypothesis	Test Administered
Type of Employment	H ₀₉ : There is no significant difference in the proportion of type of employment	One-Way Chi-Square Test
Marital Status and Work-Life Balance Perception	H ₀₁₀ : Unmarried and Married females do not significantly differ in their opinion on work-life balance	Mann-Whitney U Test
Marital Status and Workplace Bullying	H ₀₁₁ : Unmarried and Married females do not significantly differ in their opinion on workplace bullying	Mann-Whitney U Test
Marital Status and Turnover Intentions	H ₀₁₂ : Unmarried and Married females do not significantly differ in their opinion on turnover intentions	Mann-Whitney U Test
Work-Life Balance and Turnover Intentions	H ₀₁₃ : There is no correlation between work-life balance and turnover intentions	Spearman's Rank Correlation Test
Training Discrimination and Turnover Intentions	H ₀₁₄ : There is no correlation between training discrimination and turnover intentions	Spearman's Rank Correlation Test
Pay and Promotion and Turnover Intentions	H ₀₁₅ : There is no correlation between pay and promotion and turnover intentions	Spearman's Rank Correlation Test
Leave Policies and Turnover Intentions	H ₀₁₆ : There is no correlation between leave policies and turnover intentions	Spearman's Rank Correlation Test
Career Development and Turnover Intentions	H ₀₁₇ : There is no correlation between career development and turnover intentions	Spearman's Rank Correlation Test
Workplace Bullying and Turnover Intentions	H ₀₁₈ : There is no correlation between work-place bullying and turnover intentions	Spearman's Rank Correlation Test
Job Peculiarities and Turnover Intentions	H ₀₁₉ : There is no correlation between job peculiarities and turnover intentions	Spearman's Rank Correlation Test
Study on Existing Students		
Challenges in Non-Sea-Based Jobs	H ₀₂₀ : Data is normal	Kolmogorov-Smirnova Test
Opportunities in Non-Sea-Based Jobs	H ₀₂₁ : Data is normal	Kolmogorov-Smirnova Test
Challenges in Sea-Based Jobs	H ₀₂₂ : Data is normal	Kolmogorov-Smirnova Test
Opportunities in Sea-Based Jobs	H ₀₂₃ : Data is normal	Kolmogorov-Smirnova Test

Variables Used	Null Hypothesis	Test Administered
Gender and Job Preference	H ₀₂₄ : There is no association between gender and preference for job	Fisher's Exact Test
Job and Expected Pay Package	H ₀₂₅ : There is no association between preference for job and expected pay package	Fisher's Exact Test
Gender And Location of Job	H ₀₂₆ : There is no association between gender and location of job	Fisher's Exact Test
Awareness for Future Promotions And Appearing For Exams In Non-Sea Based Jobs	H ₀₂₇ : There is no association between awareness for future promotions and appearing for exams in sea based jobs	Fisher's Exact Test
Awareness for Future Promotions And Appearing For Exams In Sea Based Jobs	H ₀₂₈ : There is no association between awareness for future promotions and appearing for exams in non-sea based jobs	Fisher's Exact Test
Awareness amongst students about the course	H ₀₂₉ : There is no significant difference in the proportion of various sources of information	One-Way Chi-Square Test
Opportunities in Non-Sea Based Jobs	H ₀₃₀ : Variables are uncorrelated	Factor Analysis
Opportunities in Non-Sea Based Jobs	H ₀₃₁ : Male and female do not significantly differ in the perception of opportunity in non-sea based jobs	Mann-Whitney U Test
Challenges in Non-Sea Based Jobs	H ₀₃₂ : Variables are uncorrelated	Factor Analysis
Challenges in Non-Sea Based Jobs	H ₀₃₃ : Male and female do not significantly differ in the perception on challenges in non-sea based jobs	Mann-Whitney U Test
Study on Alumni		
Opportunities in Non-Sea Based Jobs	H ₀₃₄ : Data is normal	Kolmogorov-Smirnova Test
Challenges in Non-Sea Based Jobs	H ₀₃₅ : Data is normal	Kolmogorov-Smirnova Test
Opportunities in Sea Based Jobs	H ₀₃₆ : Data is normal	Kolmogorov-Smirnova Test
Challenges in Sea Based Jobs	H ₀₃₇ : Data is normal	Kolmogorov-Smirnova Test
Gender and Course Pursued	H ₀₃₈ : There is no association between gender and type of course pursued	Fisher's Exact Test
Gender and Initial Salary	H ₀₃₉ : There is no association between gender and initial salary	Fisher's Exact Test

Variables Used	Null Hypothesis	Test Administered
Gender and Sector of Job	H ₀₄₀ : There is no association between gender and sector of job	Fisher's Exact Test
Sources of Placements	H ₀₄₁ : There is no significant difference in the proportion of various sources of placements	One-Way Chi-Square Test
Male and Female Vs Opportunities in Non-Sea Based Jobs	H ₀₄₂ : Male and female do not significantly differ in the perception of opportunity in non-sea based jobs	Mann-Whitney U Test
Male and Female Vs Challenges in Non-Sea Based Jobs	H ₀₄₃ : Male and female do not significantly differ in the perception of challenges in non-sea based jobs	Mann-Whitney U Test
Male and Female Vs Opportunities in Sea Based Jobs	H ₀₄₄ : Male and female do not significantly differ in the perception of opportunity in sea based jobs	Mann-Whitney U Test
Male and Female Vs Challenges in Sea Based Jobs	H ₀₄₅ : Male and female do not significantly differ in the perception of challenges in sea based jobs	Mann-Whitney U Test

(Source: Author's Compilation)

3.12 Limitations Of The Research

The present study is targeted only to Gujarat State. If the other States of India were targeted then the study would provide a broader picture. The sample size may have been increased for all the five domains to get a better and a wider picture of the maritime sector. The interviews of the HODs of the educational institutes may be also conducted to get an insight on the students who pursue the maritime course, what are the expectations, which kind of jobs they prefer etc. The study would have targeted the informal sector i.e the fishermen and fisherwomen who work in the maritime sector and indirectly contribute to the economy of our country.

3.13 Conclusion

The chapter on research methodology provided the description of right from starting the research to the process of entire journey followed in completion of the research. The minutest details of research design, data sources, population, sampling design, process of data collection, questionnaire designing, approach for collecting primary and secondary data, data management, data analysis using descriptive and inferential statistics were discussed at length. The justification for each step was discussed. The cursory glance of research methodology adopted in the present study is depicted in Table 3-14.

Table 3- 14 Research Methodology At Snapshot

Basis	Women Working in Non-Sea Based Jobs	Women Working in Sea Based Jobs	Recruiters	Existing Students	Alumni
Research Objective	To study the challenges faced by women working in the maritime sector.		To understand the perception of recruiters towards prospective female employees.	To study the perception regarding opportunities and challenges toward the employability of existing final year students and alumni.	
Nature of Study	Quantitative	Qualitative	Qualitative	Quantitative	
Research Design	Descriptive	Exploratory		Descriptive	
Sub type of Research Design	Single Cross Sectional	NA		Single Cross Sectional	
Research Procedure	Direct and Non-Disguised				
Data Sources	Primary and Secondary				
Research Approach	Self-Administered Survey	Personal Interview		Self-Administered Survey	
Instrument for Survey	Questionnaire	Interview Schedule		Questionnaire	
Survey Method	Mail / Telephone Interviewing	Depth-Interviews		Mail / Telephone Interviewing	
Tools Used For Survey	Google Forms Circulation/ Traditional Phone	Traditional or Google Meet or Cisco Webex		Google Forms Circulation/ Traditional Phone	
Contact Method	E-mails	Telephonic Interview or Online Meeting or Electronic Interviewing		E-mails	

Research Instrument for Secondary Sources	Online Journals, Offline Journals, Working Papers, papers from Edited Books, Articles in Newspapers, Books, Magazines, Internet Webpages, Conference proceedings, Papers from Blogs, Database from Pro-Quest, EBSCO, J-Gate, Google Scholar and Maritime Sector Reports etc.				
Visits for Secondary Data Collection	Entrepreneurship Development Institute-Gandhinagar, IIM-Ahmedabad and Office of Gujarat Maritime Board				
Sampling Unit	Companies or Organization			Maritime Institutes	
Sampling Element	Working Women	Human Resource Manager	Students of Final Year	Recent Pass-Out Students	
Sampling Procedure	Non-Probability Sampling				
Sampling Technique	Snowball Sampling cum Expert Choice/ Judgemental Sampling		Snowball Sampling	Expert Choice/ Judgemental Sampling	
Sample Size	211	8	8	127	63
Sample Size Determination	As guided by the HR Managers of the Company		Selected Maritime Players	$n = Z^2 * p * q / e^2$, i.e. $(1.96)^2 * (0.5) (0.5) / (0.04)^2$	As guided by Placement Officer of Maritime Institutes
Sampling Area	10 Districts of Gujarat	Selected Districts of Gujarat		Ahmedabad, Gandhinagar and Mehsana	Ahmedabad, Gandhinagar and Mehsana
Sampling Duration	01 st June, 2020 to 31 st August, 2020	01 st September, 2020 to 30 th October, 2020	1 st November, 2020 to 31 st December, 2020	1 st May, 2020 to 31 st August, 2020.	1 st January, 2021 to 30 th April, 2021
Data Processing and Management	Microsoft Excel, SPSS	Field Notes, Transcripts in original verbatim		Microsoft Excel, SPSS	Microsoft Excel, SPSS
Pictorial Representation	Charts like Pie-Chart, Bar-Chart	NA			

Descriptive Statistics	Measures of Central Tendency, Measures of Dispersion, Max, Min,	Frequency and Percentage	Measures of Central Tendency, Measures of Dispersion, Max, Min,	Measures of Central Tendency, Measures of Dispersion, Max, Min, Composite Mean
Inferential Statistics	Kolmogorov-Smirnova Test, Shapiro-Wilk Test, One-Way Chi-Square Test, Mann-Whitney U Test, Spearman's Rank Correlation Test,	NA	Kolmogorov-Smirnova Test, Shapiro-Wilk Test, Fisher's Exact Test, One-Way Chi-Square Test, Two Way Chi-Square Test, Factor Analysis, Mann-Whitney U Test	Kolmogorov-Smirnova Test, Shapiro-Wilk Test, Fisher's Exact Test, One-Way Chi-Square Test, Mann-Whitney U Test

(Source: Author's Compilaition)

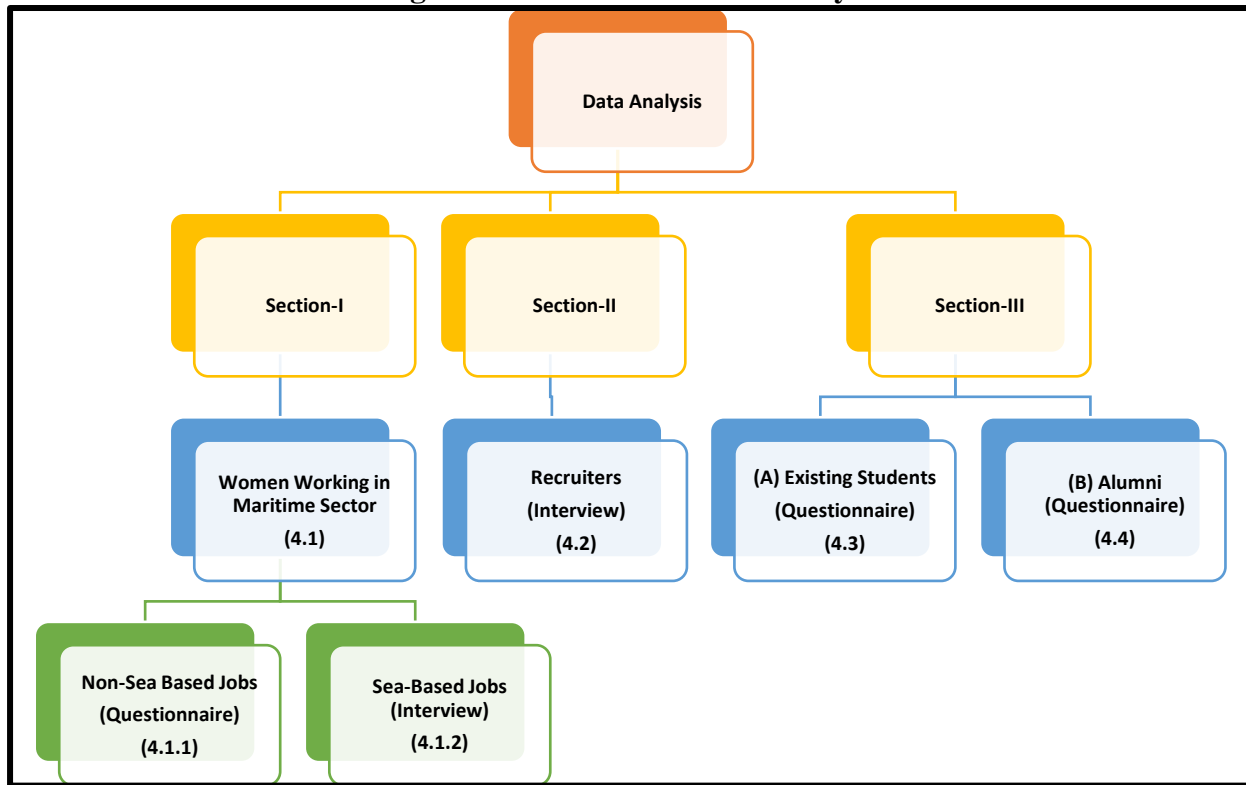
CHAPTER-4

DATA ANALYSIS

4.0 Background

Data analysis refers to the process of representing the data in appropriate manner for better understanding. Meaningful descriptive statistics were used to draw proper understanding of the data. Inferential statistics were also applied to draw meaningful insights into the data-analysis and interpretation. The data analysis chapter is divided into three Sections viz.

Figure 4- 1 Scheme Of Data Analysis



(Source: Author's Output)

As it may be observed Section-I comprises of women working in maritime sector, which was further divided into women working in Non-Sea Based Jobs and women working in Sea-Based Jobs. The study mainly focused to identify their job specific challenges. The challenges faced by women working in non-sea-based jobs were studied through questionnaire. Challenges of women working in sea-based jobs were studied through interview method. Section-II consisted of interview of recruiters. Their perspectives were important to know, as to what recruiters perceived

with respect to recruitment of women sea-farers were concerned. Section-III studied the opportunities and challenges perceived by existing students and alumni. Questionnaire method was adopted to understand the perspectives of students and alumni.

SECTION-I WOMEN WORKING IN MARITIME SECTOR

The present section is Section-I is divided into two parts viz., questionnaire analysis of women working in maritime sector in non-sea-based jobs and questionnaire analysis of women working in maritime sector in sea-based jobs.

4.1.1 Women Working In Maritime Sector In Non-Sea Based Jobs

This section analyzes the empirical data collected through questionnaire. It consists of demographic analysis; maritime course analysis; organization details; designation and cadre and work experience; and salary details analysis. The challenges that were studied were related to the work-life balance, training discrimination; pay and promotion; leave policies; career development; work-place bullying; turnover intentions and job peculiarities.

4.1.1.1 Demographic Analysis

It consists of Location, Age, Educational Qualifications, Stream of Education, Maritime Specific Course, Marital Status and Number of Children.

4.1.1.1.1 Location

An open-ended question was asked to the respondent to state their work-place location. Respondents had stated the name of the city or town in which they were currently working. For better understanding the same data was analyzed by identifying the city or town corresponding to the specific district.

Table 4- 1 Location Of The Respondents

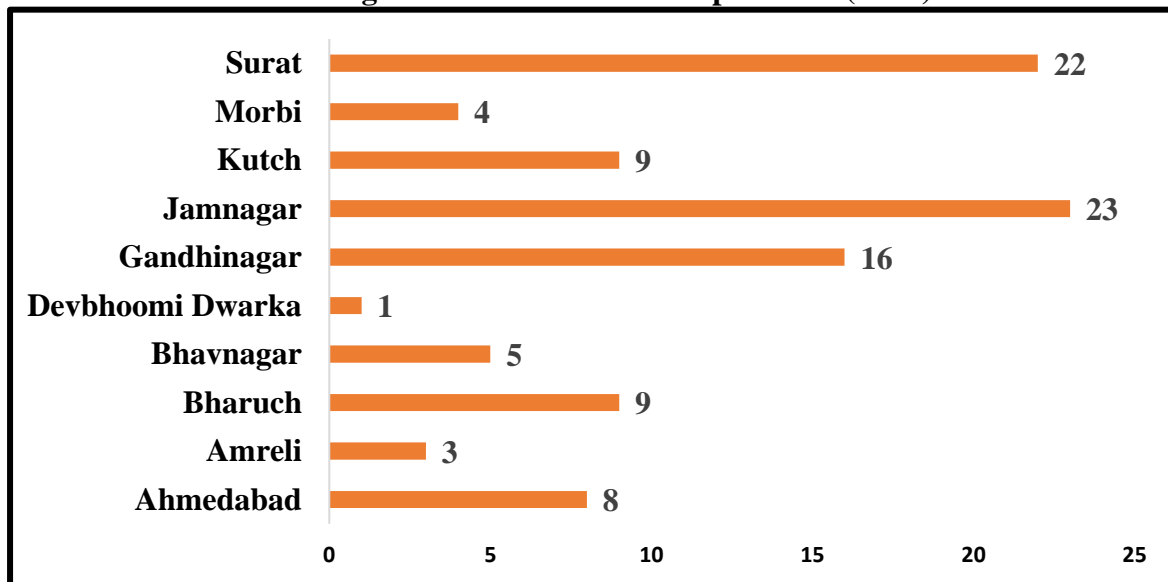
District	Frequency
Ahmedabad	17
Amreli	07
Bharuch	18
Bhavnagar	10
Devbhoomi Dwarka	02
Gandhinagar	35
Jamnagar	48
Kutch	19
Morbi and Mundra/Mandvi	08
Surat	47

District	Frequency
Total	211

(Source: Excel Output)

It may be noted that highest number of respondents were from Jamnagar followed by Surat. The presence of port across the sea-coast of Gujarat, provides employment to the masses. Gandhinagar despite not having any port, has women employees working in the back-office job of Gujarat Maritime Board. The women working in non-sea-based jobs, primarily worked in the office or institution. Such offices or institutions tend to be either near the port or away from the port. The offices near the port were involved in the core activity of the shipping of the goods and the office away from the port were involved in more of documentation, record-keeping and administration-oriented work.

Figure 4- 2 Location Of Respondents (in %)



(Source: Excel Output)

It may be observed that women worked Jamnagar (23%); Surat (22%); Gandhinagar (16%); Kutch (Nine percent); Bharuch (nine percent); Ahmedabad (Eight percent); Bhavnagar (Five percent); Morbi and Mundra/Mandvi (total Four percent); Amreli (Three percent) and Devbhoomi Dwarka (One percent). It may be inferred that the offices at major public and private ports were identified for the study. Women employees working in maritime sector were contacted for filling-up the questionnaire. The study tried to cover the port places of entire Gujarat, so that a broader view may

be obtained for studying the challenges, if any, faced by the women working in the maritime sector, across different locations.

4.1.1.1.2 Age

Respondents were asked to put a tick-mark with respect to their age, based on the categorical age groups mentioned in the questionnaire. The age group consisted of as low as, below or equal to 30 years and as high as 50 years and less than 60 years. Above 60 years were not included considering the superannuation age in administration jobs either 58 years or maximum 60 years. People working post-retirement in the same office, were beyond the scope of the study.

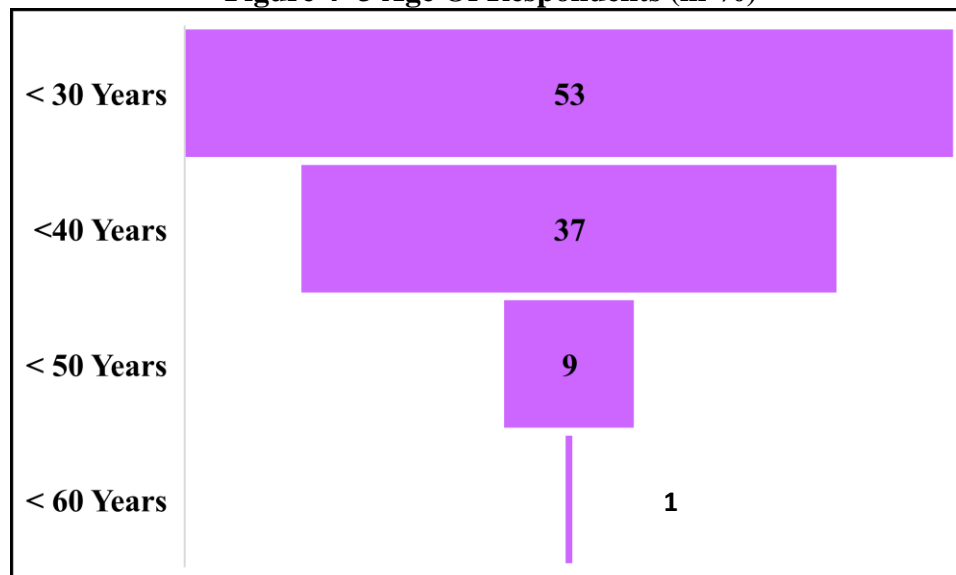
Table 4- 2 Age Of The Respondents

Age Group	Frequency
Below or Equal to 30 Years	112
30 Years and less than 40 Years	78
40 Years and less than 50 Years	20
50 Years and Less than 60 Years	01
Total	211

(Source: SPSS Output)

It may be observed that 112 women in the survey were either below 30 years or equal to 30 years. 78 women were less than 40 years of age. 20 women were less than 50 years of age and only one woman was above 50 years of age and she was nearing her superannuation age.

Figure 4- 3 Age Of Respondents (in %)



(Source: Excel Output)

It may be noticed that 53% women were less than 30 years; 37% women were more than 40 years; Nine percent were below 50 years of age and only One percent were below 60 years of age. It may be inferred that in the maritime sector there would have recently been fresh recruitments and that is why majority of the women working in the sector are young. As evident from the literature there is lot of employment opportunities in the maritime sector and the sector might have opened up for new recruitments based on its requirement for different work profile or it might have recruited on the vacant post, as replacement towards retired posts or post vacant due to employees leaving the organization (Bondestam, 2004).

4.1.1.1.3 Educational Qualification

A categorical question was asked to the respondents with respect to tick-mark their educational qualification. The choices offered were Below Graduation, Graduate and Post-Graduate.

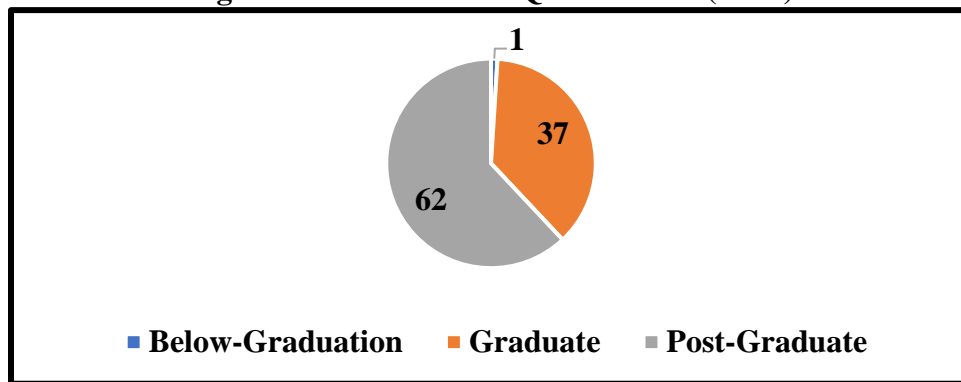
Table 4- 3 Education Qualification Of The Respondents

Degree	Frequency
Below-Graduation	01
Graduate	78
Post-Graduate	132
Total	211

(Source: SPSS Output)

It may be observed that 132 respondents were post-graduate; 78 were graduates and One was under-graduate. Higher the educational qualification, higher the monetary prospects in job. Respondents who were often got bored with the bags and books routine, did not pursue the elementary graduation level studies. Respondents who had quest for knowledge studied till post-graduation level.

Figure 4- 4 Educational Qualification (in %)



(Source: Excel Output)

62% respondents availed a post-Graduate degree; 37% gained Graduation degree and only One percent respondents did not attain any degree. It may be inferred that maritime sector not only provides jobs to degree-holders, but also, it provides jobs to candidates who do not have a degree certificate. The skill-set is a pre-requisite for non-degree holders to avail a job in the maritime sector. Highly qualified candidates, who possess both skills as well as a degree certificate, tend to receive good placement in the maritime industry. Graduation being the minimum norm for an administrative job, also offers good career opportunities in the maritime sector (Prasad, 2021) (Rovio-Johansson, 2007).

4.1.1.1.4 Age Group And Educational Qualification

A cross-tabulation was performed to derive insights from the data of age group and educational qualification.

Table 4- 4 Cross-Tabulation Of Age And Qualification

Age Group	Educational Qualification			
	Below-Graduation	Graduate	Post-Graduate	Total
< 30 Years	0	46	66	112
<40 Years	1	26	51	78
< 50 Years	0	5	15	20
< 60 Years	0	1	0	1
Total	1	78	132	211

(Source: SPSS Output)

In the entire sample 112 respondents were junior most, i.e., below 30 years of age; 78 women were below 40 years; 20 employees were below 50 years and one respondent was senior most i.e., below 60 years. Overall, only One woman studied less than graduation level; 78 women pursued her studies till graduation level and 132 women studied acquired a Post-Graduate degree.

It may be noted that 112 respondents who were below 30 years of age studied at least till graduation. Within the age group of less than 40 years, 77 respondents studied at least till graduation level. Only 20 respondents in the age bracket of less than 50 years completed their studies at least till graduation level. It may be inferred that women employees who were below 30 years were more qualified than women employees who were below 40 years. This clearly points out the importance of education and degree in today's competitive scenario. Thus, respondents below 30 years had more in terms of educational degree and respondents below 40 years had more in terms of

experience. A good educational qualification opens gate for white-collared jobs (Kumar and Kapoor, 2021).

4.1.1.1.5 Stream Of Education

A nominal scale-based question was probed to the respondent to know their stream of education. The options stated were Science, Commerce, Arts and Others.

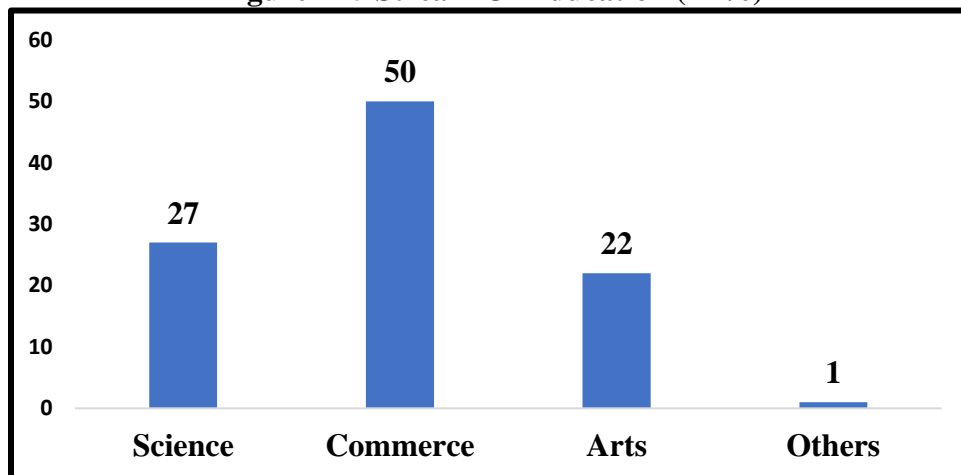
Table 4- 5 Steam Of Education

Discipline	Frequency
Science	58
Commerce	106
Arts	46
Others	01
Total	211

(Source: SPSS Output)

It is observed that 106 respondents studied in commerce stream; 58 pursued their education in science stream; 46 pursued in Arts faculty and one respondent opted for some non-conventional course. From the literature review it was understood that people often believed that Science stream was the toughest, followed by Commerce and Arts. The branching of three special streams starts post-secondary level school education. Based on the interest the pupil may choose his or her stream of study and pursue the elementary school level course and degree course at college in the same field. The education system often offers the transition from higher to lower-level stream, but not vice-versa.

Figure 4- 5 Stream Of Education (in %)



(Source: Excel Output)

50% pursued the education in Commerce stream; 27% studied in Science stream, 22% had opted in Arts stream and only One percent pursued different types of courses. Only one respondent had studied from Industrial Training Institute (ITI). It may be inferred that masses opted for Commerce stream and classes opted for Science stream. Maritime sector employs students of various faculties. Thus, the job profile offered would differ on the stream of education and the completion of the final degree.

4.1.1.1.6 Maritime Specific Course

A dichotomous question was asked to the respondents, if they had pursued any maritime course. It was also requested to state the name of the course.

Table 4- 6 Maritime Course

Response	Frequency	Percent
Yes	15	07
No	196	73
Total	211	100

(Source: SPSS Output)

73% respondents did not pursue any maritime specific course only Seven percent respondents pursued the maritime course. It was stated by the respondents that they had either pursued Master of Business Administration in Maritime or Master of Legal Law. The specialization was either in Port Management or Logistics and Shipping Management or Maritime Law or International Law. It is a myth to believe that only people who have pursued maritime course would be eligible for job in the sector. The specific sector knowledge would definitely offer an added advantage, but the student of any stream may access the job opportunities flourishing in maritime sector. It may also be evident that maximum respondents in the survey were below 30 years of age, and if the completion of post-graduate studies were assumed at maximum 23 years, then it may be inferred that job-holders might have gained sufficient practical knowledge by working in maritime sector (Mishra, 2019).

4.1.1.1.7 Marital Status

A categorical question was asked to the respondents to state their marital status. The respondent had to tick mark the response that best described their status as either unmarried or married or separated. The output of the same is represented in Table 4-7. The output is interpreted using frequency and percentage to derive better insights.

Table 4- 7 Marital Status

Status	Frequency	Percent
Unmarried	79	37
Married	131	62
Separated	01	01
Total	211	100

(Source: SPSS Output)

It may be observed that 62% respondents were married, 37% were unmarried and One percent was separated. As per the social structure set-up, post-education and career, the second phase of a person begins when he or she gets married. The married life brings in lot responsibilities especially for women, who has to play a dual role i.e., of a working woman and home-maker. While playing this dual role, women often feels that her life is divided into worlds i.e., professional world in the office and personal world at home. In the literary work it was noted that married women often complained of work-life balance. In fact, it turned out to be a very sensitive decision for woman when she had to make a choice between career or home. It was also reported in the literature that women out of dissonance often took decision of either quitting the job, or perform part-time job when she felt that her current job hindered her family life. At times married woman often left her job, that involved either lot of travelling, touring, or very time-demanding schedules. She instead opted for a back-office job which had a fixed time-schedule, so, that she may peacefully carryout her domestic chores. Women often had to succumb to either family pressure or the final word from the head of the family to opt for a particular type of job. Unmarried women enjoyed a liberty in job selection, provided the family support was positive. The literature also noted that unmarried women rarely experienced a work-life balance issue, given the limited domestic responsibility that she was supposed to handle (Machuca, Mirabent and Alegre, 2016).

4.1.1.1.8 Number Of Children

An open-ended question was asked to the respondents to indicate the number of children. It was clearly indicated that the answer was optional to share.

Table 4- 8 Number Of Children

Number	Frequency	Percent
0	129	61
1	53	25
2	29	14

Number	Frequency	Percent
Total	211	100

(Source: SPSS Output)

All the 211 respondents replied to this question, despite it was optional to answer. It was noted that 61% had no children. 25% had one child and 14% had two children. For a woman, the responsibility of upbringing the child is immense. In the Indian family set-up, the entire load of nurturing the child is levied on woman. Rearing the child is a full-time responsibility. Even home-makers believed that the child care leaves no time for her. The child care responsibility becomes very difficult, if the woman is working. It was also noted in the literary work that inadequate childcare created a guilt feeling in the woman to such an extent that she often took a decision to quit the job (Reddy *et al.*, 2010; Ziegler, 2020).

4.1.1.2 Organization Details, Designation and Cadre

It consists of Current Organization, Nature of Employment, Organizational Level and Current Department.

4.1.1.2.1 Current Organization

The respondents were asked an open-ended question, to name their current organization. It was requested to state the full name of the organization. It was noted that as high as 154 respondents did not respond to this question and remaining 57 respondents had haphazardly reported the name of their organization in abbreviation. It may be inferred that respondents did not wish to reveal their name of the organization, and therefore did not respond to the question.

4.1.1.2.2 Nature Of Employment

A categorical question was asked to the respondent to state the nature of their employment. Options that were mentioned were Permanent, contractual, outsource and others. The respondent had to choose one of the applicable option.

Table 4- 9 Nature Of Employment

Type of Employment	Frequency	Percent
Permanent	48	23
Contractual	64	30
Outsource	85	40
Others	14	07
Total	211	100

(Source: SPSS Output)

It may be observed that 40% were Outsourced by the organization; 30% worked on Contractual basis; 23% worked as a Permanent employee and Seven percent worked on some other mode. Under outsource model the company recruits through manpower supply service agency. Such respondents work in the maritime sector, but they are considered as an employee of the agency and not the company in which they are working. At times companies might directly recruit directly, but on a contractual basis. Many government organizations, in order to ease out the burden of creating a permanent liability have started using either outsource model or contractual model.

4.1.1.2.3 Organizational Level

The respondents were asked a categorical question to indicate the level at which they were working. Three choices were offered, out of which only one had to be selected. The level in the organization were defined as entry level, middle level and senior level.

Table 4- 10 Cadre Of Employment

Level	Frequency	Percent
Entry	85	40
Middle	96	46
Senior	30	14
Total	211	100

(Source: SPSS Output)

It may be noted that 46% respondents worked at middle level; 40% performed their duties at entry level and 14% worked at senior (top) level. Based on the performance and work experience the employee progress from entry level to the top level. As the majority of the respondents were below 30 and 40 years of age, they tend to be at either entry or middle level.

4.1.1.2.3 Age, Educational Qualification And Cadre Of Employment

A cross-tabulation was performed for deriving better insights on the data of age and cadre of employment. The table was further classified with the educational qualification, to draw meaningful understanding.

Table 4- 11 Cross-Tabulation Of Age And Cadre Of Employment Layered By Educational Qualification

Age	Educational Qualification	Cadre of Employment			Total
		Entry Level	Middle Level	Senior Level	
Below or Equal to 30 Years	Graduate	28	17	1	46
	Post-Graduate	36	25	5	66

Age	Educational Qualification	Cadre of Employment			Total
		Entry Level	Middle Level	Senior Level	
	Total	64	42	6	112
30 Years and less than 40 Years	Under Graduate	0	0	1	1
	Graduate	5	19	2	26
	Post-Graduate	13	28	10	51
	Total	18	47	13	78
40 Years and less than 50 Years	Graduate	2	1	2	5
	Post-Graduate	1	6	8	15
	Total	3	7	10	20
50 Years and Less than 60 Years	Graduate	0	0	1	1
	Total	0	0	1	1
Total	Under Graduate	0	0	1	1
	Graduate	35	37	6	78
	Post-Graduate	50	59	23	132
	Total	85	96	30	211

(Source: SPSS Output)

It may be observed that only one under-graduate person was able to work on senior level. Despite low qualification, the women employee was able to work at senior level which may be attributed to the job experience and not the degree. This may be further confirmed by the age of the respondent who is more than 50 years but less than 60 years and hold a good level of work experience. Based on the graduation degree the respondents were able to work at the entry level and over a period of time with experience they were able to climb the career ladder. As high as 23 respondents holding post-graduate degree were noted to work at the senior level. It clearly indicates that a post-graduate pupil has good domain knowledge and hence companies prefer to absorb them at senior level, after the due assessment of skills set. In the literature also it is evident that post-graduate students get to start at a higher level and they tend to climb the career ladder faster than the graduate masses (Indian Education System, 2020).

4.1.1.2.4 Age, Educational Qualification, Maritime Course And Cadre Of Employment

A cross-tabulation was performed for deriving better insights on the data of educational qualification and cadre of employment. The table was further classified with the completion of maritime course, to draw meaningful understanding.

Table 4- 12 Cross-Tabulation Of Educational Qualification And Cadre Of Employment Layered By Maritime Course

Educational Qualification	Maritime Course	Cadre of Employment			Total
		Entry Level	Middle Level	Senior Level	
Under Graduate	No	0	0	1	1
	Total	0	0	1	1
Graduate	Yes	3	0	1	4
	No	32	37	5	74
	Total	35	37	6	78
Post-Graduate	Yes	7	2	2	11
	No	43	57	21	121
	Total	50	59	23	132
Total	Yes	10	2	3	15
	No	75	94	27	196
	Total	85	96	30	211

(Source: SPSS Output)

It may be observed that only 15 respondents had completed the maritime course either at graduation level or post-graduation level. 196 respondents did not pursue any kind of maritime specific course, yet they worked at entry level, middle level and senior level. It is a myth to believe that completion of specific maritime course would only open the employment gates in the sector. The conventional degree and post-graduate degree, also provide the pupil a chance to work in the maritime sector. It may be inferred that basic conceptual clarity would provide a chance to work in the maritime sector and gaining the domain knowledge in the same sector when working on the job, may help the employee to excel in the field, through competency and skills.

4.1.1.2.5 Stream Of Education And Cadre Of Employment

A cross-tabulation was performed to understand if the pupil from different stream of education could work at different level of organization in the maritime sector. The cross-tabulation was performed to derive better results. The same is discussed further.

Table 4- 13 Cross-Tabulation Of Stream Of Education And Cadre Of Employment

Stream of Education	Cadre of Employment			Total
	Entry Level	Middle Level	Senior Level	
Science	29	20	9	58
Commerce	41	52	13	106

Stream of Education	Cadre of Employment			Total
	Entry Level	Middle Level	Senior Level	
Arts	15	24	7	46
Others	0	0	1	1
Total	85	96	30	211

(Source: SPSS Output)

It may be noted that all the streams of education open up the opportunity to work in the maritime sector and that too at various cadre. As high as 106 respondents from Commerce background worked in the maritime sector. 58 respondents from Science stream and 46 respondents from Arts stream worked in the maritime sector.

4.1.1.2.6 Current Department

A blend of closed-ended and open-ended question was asked to the respondent to know in which department they were working since last one year.

Table 4- 14 Current Department

Department	Frequency	Percentage	Department	Frequency	Percentage
Finance	45	21	Marine Traffic	6	3
Administration	38	18	Business development	3	1
Engineering	23	11	Civil	3	1
Education	18	9	Design	3	1
Accounts	17	8	Dredging	2	1
Human Resource	17	8	Privatization Cell	2	1
Operations	14	7	Security	2	1
Supply-Chain and Logistics	9	4	Stores	2	1
Others	7	3	Total	211	100

(Source: SPSS Output)

It may be observed that a large number of respondents were working in Finance department (21%), followed by Administration (18%), Engineering (11%), Education (nine percent), Accounts (eight percent), Human Resource (eight percent), Operations (seven percent), Supply-Chain and Logistics (four percent), Marine Traffic (three percent) and one percent each in Business Development, Civil,

Design, Dredging, Privatization Cell, Security and Stores. With respect to other departments, it was noted that women were working in Corporate Social Responsibility department, Environment Cell, Law, Maintenance department, Nomination (overseas) department, Project department and Statistics department. It indicates that women were working across different departments of the organization. It may be inferred that women worked in the back-office and handled the clerical responsibility. The nature of the work was desk and desk-top oriented. It may be evident that maritime sector offered desk-jobs for women which were of similar type as offered in the different conventional sectors such as banking, insurance etc. It is a myth to believe that to avail jobs in the maritime sector, one must have the maritime related educational qualifications only (Hjarnoe and Leppin, 2013).

4.1.1.3 Work Experience And Salary Details

It consists of Work Experience in Maritime Sector, Total Work Experience in the Current Organization and Gross Annual Salary.

4.1.1.3.1 Work Experience In Maritime Sector

An open-ended ratio scale question was probed to the respondents to know their total work experience in maritime sector. The statistics indicated that women on an average (mean= X) had worked in the maritime sector for 4.05 years. The Standard Deviation (SD) was noted as 3.84 years. It may be understood that the difference in the work experience was wide amongst the set of surveyed women. A respondent with 18 years of experience in the maritime sector topped the list. The fresher who had just joined the maritime sector was working from last four months only. It may be inferred that maritime sector offers jobs for freshers, just like the conventional sectors of the economy.

4.1.1.3.2 Total Work Experience In The Current Organization

An open-ended ratio scale question was probed to the respondents to know their total work experience in the current organization. The statistics indicated that women on an average (mean= X) had worked in the current organization for 3.22 years. The Standard Deviation (SD) was noted as 3.19 years. It may be understood that respondents had joined the organization at different time and hence their work experience was not identical. The most loyal employee of the organization was found to be associated with the current organization from last 23 years. The newly joined respondent had started working in the current organization in the last four months only. It is a myth to believe that to avail jobs in maritime sector one must have a working experience in the same

sector. Thus, a transition from the conventional sector to maritime sector is also possible. It is customary to note that organization now-a-days offers induction training to the new joiner to make them better equipped with the work profile and work culture. Such training would bridge the gap and make the employee accustomed to the maritime work profile (Hystad and Heid, 2016).

4.1.1.3.3 Gross Annual Salary

A nominal question was probed to the respondent to tick mark the gross annual salary that he or she was drawing. The options were less than Rs.3,00,00; Rs.3,00,001 to Rs.5,00,000; Rs.5,00,001 to Rs.7,00,000 and above Rs.7,00,000.

Table 4- 15 Gross Annual Salary

Particulars	Frequency	Percent
Less than Rs.3,00,000	121	57
Rs.3,00,001-Rs.5,00,000	63	30
Rs.5,00,001-Rs.7,00,000	12	6
Above Rs.7,00,000	15	7
Total	211	100

(Source: SPSS Output)

57% respondents received annual salary less than Rs.3,00,000. 30% drew salary between Rs.3,00,001 to Rs.5,00,000. Six percent respondent were in the salary bracket of Rs.5,00,001 to Rs.7,00,000. Seven percent respondent had an annual gross salary package above Rs.7,00,000. It may be noted that maritime sector offered handsome salary package. In the literature it was highlighted that generally women's salary is considered a second income by the family. Dual income helps the family to raise its standard of living. Thus, it may be inferred that if the women avail a job which is back-office in nature and draws a good amount of salary, then it becomes a cozy place to remain or get associated with the organization for a longer period of time.

4.1.1.3.4 Nature Of Employment And Gross Annual Salary

A cross-tabulation was performed to understand the nature of employment and gross annual salary derived by the respondents by working in the maritime sector.

Table 4- 16 Cross-Tabulation Of Nature Of Employment And Gross Annual Salary

Nature of Employment	Gross Annual Salary				Total
	Less than Rs.3,00,000	Rs.3,00,001-Rs.5,00,000	Rs.5,00,001-Rs.7,00,000	Above Rs.7,00,000	
Permanent	8	21	5	14	48
Contractual	44	16	3	1	64

Nature of Employment	Gross Annual Salary				Total
	Less than Rs.3,00,000	Rs.3,00,001-Rs.5,00,000	Rs.5,00,001-Rs.7,00,000	Above Rs.7,00,000	
Outsource	55	26	4	0	85
Others	14	0	0	0	14
Total	121	63	12	15	211

(Source: SPSS Output)

It may be observed that 48 employees who were absorbed on permanent basis derived salary starting from less than Rs.3,00,000 to more than Rs.7,00,000, depending upon their qualification and experience. As high as 163 respondents work on either contractual or outsource or on some other model in the organization. Despite not being on payroll, they derive starting salary of at most Rs.30,000 and the package keeps improving based on their qualification and experience. Contractual employees also derive salary more than Rs.7,00,000. It may be inferred that maritime sector offers handsome salary to start with. In the literature also it had been pointed out that the niche sector has good employment opportunities with good starting pay. The Government of India had stopped the most attractive incentive of defined pension benefits for all employees who joined after 1st April, 2004, the demarcation between public sector jobs and private sector jobs to a large extent has been eliminated. In such a competitive scenario, if the females get to start in maritime sector with a good salary and that too with a back-office work, it is considered as a blessing to generate second income by carrying out a cozy work.

4.1.1.3.5 Educational Qualification, Gross Annual Salary And Cadre Of Employment

A cross-tabulation was performed to understand the impact of educational qualification and cadre of employment. To derive meaningful insight, it was layered by gross annual salary. The discussion on the same is mentioned further.

Table 4- 17 Cross Tabulation Of Educational Qualification And Cadre Of Employment, Layered By Gross Annual Salary

Educational Qualification	Gross Annual Salary	Cadre of Employment			Total
		Entry Level	Middle Level	Senior Level	
Under Graduate	Less than Rs.3,00,000	0	0	1	1
	Total	0	0	1	1
Graduate	Less than Rs.3,00,000	33	11	2	46
	Rs.3,00,001-Rs.5,00,000	1	21	0	22

Educational Qualification	Gross Annual Salary	Cadre of Employment			Total
		Entry Level	Middle Level	Senior Level	
	Rs.5,00,001-Rs.7,00,000	1	5	0	6
	Above Rs.7,00,000	0	0	4	4
	Total	35	37	6	78
Post-Graduate	Less than Rs.3,00,000	43	22	9	74
	Rs.3,00,001-Rs.5,00,000	6	31	4	41
	Rs.5,00,001-Rs.7,00,000	0	6	0	6
	Above Rs.7,00,000	1	0	10	11
	Total	50	59	23	132
Total	Less than Rs.3,00,000	76	33	12	121
	Rs.3,00,001-Rs.5,00,000	7	52	4	63
	Rs.5,00,001-Rs.7,00,000	1	11	0	12
	Above Rs.7,00,000	1	0	14	15
	Total	85	96	30	211

(Source: SPSS Output)

It may be observed that higher the education level, higher will be the pay. From the survey, it may be noted that large number of post-graduate holders work at entry, middle and senior level. Based on the skills and basic academic qualification they draw the salary starting from at most Rs.3,00,000 to at least Rs.7,00,000. Only one employee derives a salary of less than Rs.3,00,000 despite working at the senior level, because her education qualification is less than graduation. Thus, it may be inferred that higher educational qualification accompanied with skills and work-experience may provide an added advantage to draw higher salary (Bhattacharjee, 2021).

4.1.1.4 Work-Life Balance

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the work-life balance as perceived by the respondent. The reliability statistics was performed and the Cronbach Alpha was noted as 0.87 for seven items. The Cronbach Alpha value was greater than 0.60.

Table 4- 18 Work-Life Balance

Statements	Mean	Std. Deviation
I get sufficient time for my leisure activities.	3.64	0.99
I am able to finish work within the working hours, so there is no need to work overtime.	3.83	0.96

Statements	Mean	Std. Deviation
I get enough of time to spend with my family and friends.	3.66	1.10
The social benefits that the company provides me are important to me.	3.69	0.97
I am currently able to maintain a balance between the time I spend at work and non-work activities.	3.85	0.92
My current schedule offers flexibility at work.	3.83	0.85
I am able to execute my job without getting burnt out.	3.95	0.93

(Source: SPSS Output)

The mean values of all the statements were nearer to four, which indicated an agreement with the statements. The SD was less than one, which indicated that there was a strong consensus amongst the respondents with respect to their opinion on work-life balance. Only for the third statement, the SD was more than one, which represented that respondent differed in their opinion on spending sufficient time with family and friends. A person wishes to spend quality time with the near and dear ones and it is always craved by the individual to spend more time. Spending time with family and friends is a very subjective issue and hence there is no limit to which one would say that the time spent was sufficient (Brough, *et al.*, 2014).

4.1.1.5 Training Discrimination

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify if the respondents faced any training discrimination issue. The initial reliability statistics was performed and the Cronbach Alpha was noted as 0.47 for four items, which was less than the benchmark value exceeding 0.60. So, one of the item was dropped to improve the reliability. The Cronbach Alpha value on three statements, was 0.61, which was greater than 0.60.

Table 4- 19 Training Discrimination

Statements	Mean	Std. Deviation
I have experienced that female employees are more likely to be excluded from training programmes.	2.82	1.21
In my organization, female managers are paid less as compared to their male counterparts.	2.49	1.29
Men and women in the same roles at our organization have different wages and titles.	2.58	1.19

(Source: SPSS Output)

The mean values of all the statements were two or above two, which indicated a dis-agreement with the statements. The SD was greater than one for all statements, which indicated that the

responses were quite away from the mean i.e. it did not cluster around mean values. Thus, it may be inferred that respondents significantly differed in their opinion on training discrimination.

4.1.1.6 Pay And Promotion

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the opinion on pay and promotion. The reliability statistics was performed and the Cronbach Alpha was noted as 0.81 for six items. The Cronbach Alpha value was greater than 0.60.

Table 4- 20 Pay And Promotion

Statements	Mean	Std. Deviation
Female employees have a harder time finding jobs than male employees.	3.14	1.24
The wages of Female employees' are increasing at a slower rate than male employees.	2.63	1.16
Career development programs for female employees are lacking in my organization.	2.68	1.08
Performance assessment system followed in my organization is unfavourable for female employees.	2.53	1.07
Male employees are more likely to be hired for core (professional) jobs than female employees.	2.84	1.26
It is harder for female employees to move to departments that have more chances of advancement.	2.65	1.22

(Source: SPSS Output)

The mean values of all the statements were nearer to three, which indicated a neutral view towards the opinion on pay and promotion related statements. The SD was greater than one for all statements, which indicated that there was no consensus in the response. All the respondent had different perceptions towards pay and promotion related matters.

4.1.1.7 Leave Policies

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the opinion on leave policies. The reliability statistics was performed and the Cronbach Alpha was noted as 0.64 for three items. The Cronbach Alpha value was greater than 0.60.

Table 4- 21 Leave Policies

Statements	Mean	Std. Deviation
My maternity leave was long enough to take care of my child.	2.93	1.12
Because I took maternity leave, I was denied promotion prospects at work.	2.82	1.02

Statements	Mean	Std. Deviation
I was able to take the right amount of maternity leave for me.	3.40	1.14

(Source: SPSS Output)

The mean values of two statements were nearer to three, which indicated a neutral view towards the opinion on leave policies statements. Only one statement had, the mean value was greater than three i.e. four, which indicated agreement. All the responses did not cluster around mean and hence the SD was noted greater than one for all the statements, indicating there was no consensus in the opinion on leave policies.

4.1.1.8 Career Development

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the opinion on leave policies. The reliability statistics was performed and the Cronbach Alpha was noted as 0.78 for four items. The Cronbach Alpha value was greater than 0.60.

Table 4- 22 Career Development

Statements	Mean	Std. Deviation
At our organisation, female managers/supervisors typically are promoted up to a certain level and then they are stopped.	2.72	0.94
I believe our firm is committed to removing obstacles that restrict women from realising their full potential.	3.42	1.01
Men are promoted faster than women in my organization.	2.53	1.06
Men are more likely than women to be promoted in this organization.	2.58	1.00

(Source: SPSS Output)

The mean values of all statements was nearer to three, which indicated a neutral view towards the opinion on career development. Majority of the responses did not cluster around mean and hence the SD was noted greater than one. Respondents indicated their consensus for promoting women managers or supervisors up to certain level only and hence it's SD was less than one.

4.1.1.9 Work-Place Bullying

A five-point likert scale (5: Daily to 1: Never) question was asked to identify the opinion on work-place bullying. The reliability statistics was performed and the Cronbach Alpha was noted as 0.96 for seventeen items. The Cronbach Alpha value was greater than 0.60.

Table 4- 23 Work-Place Bullying

Statements	Mean	Std. Deviation
Sometimes my assignments are being shifted to my male counterpart without my knowledge or consent.	1.44	0.86
My work is undervalued.	1.87	1.31
I am being assigned work that is below my degree of expertise.	1.82	1.38
My work is being constantly monitored without justified reasons.	1.86	1.26
I am threatened in both ways verbally and nonverbally by my male colleague.	1.37	1.00
My male colleagues make inappropriate jokes/remarks about me.	1.30	0.88
Information's are not shared or not given in time that affects my performance and professional life.	1.55	0.91
Many times I am excluded from workgroup activities.	1.47	0.99
Many times I am denied for leave request, training or promotion without giving a justified reason.	1.38	0.94
Sometimes I am given impossible deadline.	1.67	1.00
My colleagues at time spread false rumours against my work and behaviour.	1.49	0.94
Offensive comments/remarks concerning my personal or private life are repeatedly made.	1.42	0.99
Often I get signals to resign.	1.35	0.91
Repeated reminders are given to me for similar mistakes again and again.	1.41	0.97
Often my Opinions are neglected.	1.54	0.98
I am compelled to attend additional meetings and training sessions unlike my male counterparts.	1.59	1.23
My superiors use disciplinary/competence procedure to threaten me.	1.64	1.31

(Source: SPSS Output)

The mean values of all statements were between one and two indicating respondents significantly never or rarely on their opinion on work-place bullying. The consensus could be easily identified if the SD was less than one. If the SD was greater than one, then respondents had no consensus in their opinion.

4.1.1.10 Turnover Intentions

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the opinion on turnover intentions. The reliability statistics was performed and the Cronbach Alpha was noted as 0.72 for five items. The Cronbach Alpha value was greater than 0.60.

Table 4- 24 Turnover Intentions

Statements	Mean	Std. Deviation
I often think of leaving the organization.	2.44	1.08
It's extremely likely that I'll start looking for a new employment next year.	2.42	0.99
I don't think I'll stay with this company for the rest of my career.	2.51	0.98
If I may chosen again, I will choose to work for the current organization.	3.81	0.97
I often look to see if such positions in other firms are open.	2.85	1.09

(Source: SPSS Output)

The mean values greater than two indicated neutral and the mean values less than three indicated disagreement on the opinion. It was also noted that mean value greater than three indicated agreements. The SD greater than one indicated no consensus on the opinion. The statements in which the SD was less than one, all the respondents indicated a similar opinion.

4.1.1.11 Job Peculiarities

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the opinion on job peculiarities. The reliability statistics was performed and the Cronbach Alpha was noted as 0.70 for five items. The Cronbach Alpha value was greater than 0.60.

Table 4- 25 Job Peculiarities

Statements	Mean	Std. Deviation
Ports job location are at far off places and poses difficulty as a female in commuting.	2.91	1.06
My organization works as per shifts including night shifts.	1.99	0.90
I also get night shifts.	1.73	0.91
Job related to maritime, females are generally not preferred.	2.37	1.07
Mostly the percentage of male is much higher in maritime sector than female.	3.32	1.26

(Source: SPSS Output)

The mean values nearer to two indicated, disagreement and the mean values nearer to three depicted neutral opinion. The SD less than one and greater than one respectively, indicated consensus and no consensus on the opinion of job peculiarities.

4.1.1.12 Inferential Statistics

Hypothesis testing was done on the data. The results of the same are discussed below.

4.1.1.12.1 Test Of Normality On Work-Life Balance

H_{01} : Data is normal.

H_{11} : Data is not normal.

Table 4- 26 Test Statistics For Normality Test On Work-Life Balance

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
I get sufficient time for my leisure activities.	0.27	211	0.00	0.87	211	0.00
I am able to finish work within the working hours, so there is no need to work overtime.	0.31	211	0.00	0.84	211	0.00
I get enough of time to spend with my family and friends.	0.26	211	0.00	0.88	211	0.00
The social benefits that the company provides me are important to me.	0.25	211	0.00	0.88	211	0.00
I am currently able to maintain a balance between the time I spend at work and non-work activities.	0.30	211	0.00	0.84	211	0.00
My current schedule offers flexibility at work.	0.29	211	0.00	0.85	211	0.00
I am able to execute my job without getting burnt out.	0.28	211	0.00	0.84	211	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words, it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.1.1.12.2 Test Of Normality On Training Discrimination

H_{02} : Data is normal.

H_{12} : Data is not normal.

Table 4- 27 Test Statistics For Normality Test On Training Discrimination

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
I have experienced that female employees are more likely to be excluded from training programmes.	0.25	211	0.00	0.88	211	0.00
In my organization, female managers are paid less as compared to their male counterparts.	0.29	211	0.00	0.84	211	0.00
Men and women in the same roles at our organization have different wages and titles.	0.26	211	0.00	0.88	211	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words, it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.1.1.12.3 Test Of Normality On Pay And Promotion

H_{03} : Data is normal.

H_{13} : Data is not normal.

Table 4- 28 Test Statistics For Normality Test On Pay And Promotion

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Female employees have a harder time finding jobs than male employees.	0.24	211	0.00	0.87	211	0.00
The wages of Female employees' are increasing at a slower rate than male employees.	0.24	211	0.00	0.90	211	0.00
Career development programs for female employees are lacking in my organization.	0.24	211	0.00	0.89	211	0.00
Performance assessment system followed in my organization is unfavourable for female employees.	0.26	211	0.00	0.88	211	0.00

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Male employees are more likely to be hired for core (professional) jobs than female employees.	0.25	211	0.00	0.88	211	0.00
It is harder for female employees to move to departments that have more chances of advancement.	0.23	211	0.00	0.89	211	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words, it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.1.1.12.4 Test Of Normality On Leave Policies

H_{04} : Data is normal.

H_{14} : Data is not normal.

Table 4- 29 Test Statistics For Normality Test On Leave Policies

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
My maternity leave was long enough to take care of my child.	0.21	112	0.00	0.90	112	0.00
Because I took maternity leave, I was denied promotion prospects at work.	0.19	112	0.00	0.91	112	0.00
I was able to take the right amount of maternity leave for me.	0.20	112	0.00	0.90	112	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words, it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value

is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.1.1.12.5 Test Of Normality On Career Development

H₀₅: Data is normal.

H₁₅: Data is not normal.

Table 4- 30 Test Statistics For Normality Test On Career Development

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
At our organisation, female managers/supervisors typically are promoted up to a certain level and then they are stopped.	0.28	211	0.00	0.85	211	0.00
I believe our firm is committed to removing obstacles that restrict women from realising their full potential.	0.23	211	0.00	0.90	211	0.00
Men are promoted faster than women in my organization.	0.30	211	0.00	0.82	211	0.00
Men are more likely than women to be promoted in this organization.	0.29	211	0.00	0.86	211	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words, it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.1.1.12.6 Test Of Normality On Work-Place Bullying

H₀₆: Data is normal.

H₁₆: Data is not normal.

Table 4- 31 Test Statistics For Normality Test On Work-Place Bullying

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Sometimes my assignments are being shifted to my male counterpart without my knowledge or consent.	0.42	211	0.00	0.57	211	0.00
My work is undervalued.	0.30	211	0.00	0.66	211	0.00
I am being assigned work that is below my degree of expertise.	0.35	211	0.00	0.61	211	0.00
My work is being constantly monitored without justified reasons.	0.33	211	0.00	0.70	211	0.00
I am threatened in both ways verbally and nonverbally by my male colleague.	0.47	211	0.00	0.41	211	0.00
My male colleagues make inappropriate jokes/remarks about me.	0.49	211	0.00	0.38	211	0.00
Information's are not shared or not given in time that affects my performance and professional life.	0.37	211	0.00	0.64	211	0.00
Many times I am excluded from workgroup activities.	0.43	211	0.00	0.53	211	0.00
Many times I am denied for leave request, training or promotion without giving a justified reason.	0.47	211	0.00	0.46	211	0.00
Sometimes I am given impossible deadline.	0.32	211	0.00	0.69	211	0.00
My colleagues at time spread false rumours against my work and behaviour.	0.40	211	0.00	0.58	211	0.00
Offensive comments/remarks concerning my personal or private life are repeatedly made.	0.45	211	0.00	0.47	211	0.00
Often I get signals to resign.	0.48	211	0.00	0.43	211	0.00
Repeated reminders are given to me for similar mistakes again and again.	0.46	211	0.00	0.48	211	0.00
Often my Opinions are neglected.	0.38	211	0.00	0.59	211	0.00
I am compelled to attend additional meetings and training sessions unlike my male counterparts.	0.45	211	0.00	0.54	211	0.00

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
My superiors use disciplinary/competence procedure to threaten me.	0.45	211	0.00	0.53	211	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words, it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.1.1.12.7 Test of Normality On Turnover Intentions

H_{07} : Data is normal.

H_{17} : Data is not normal.

Table 4- 32 Test Statistics For Normality Test On Turnover Intentions

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
I often think of leaving the organization.	0.24	211	0.00	0.87	211	0.00
It's extremely likely that I'll start looking for a new employment next year.	0.19	211	0.00	0.89	211	0.00
I don't think I'll stay with this company for the rest of my career.	0.21	211	0.00	0.89	211	0.00
If I may chosen again, I will choose to work for the current organization.	0.28	211	0.00	0.85	211	0.00
I often look to see if such positions in other firms are open.	0.20	211	0.00	0.91	211	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words, it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value

is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.1.1.12.8 Test Of Normality On Job Peculiarities

H₀₈: Data is normal.

H₁₈: Data is not normal.

Table 4- 33 Test Statistics For Normality Test On Job Peculiarities

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Ports job location are at far off places and poses difficulty as a female in commuting.	0.17	211	0.00	0.91	211	0.00
My organization works as per shifts including night shifts.	0.24	211	0.00	0.84	211	0.00
I also get night shifts.	0.28	211	0.00	0.75	211	0.00
Job related to maritime, females are generally not preferred.	0.22	211	0.00	0.89	211	0.00
Mostly the percentage of male is much higher in maritime sector than female.	0.22	211	0.00	0.90	211	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words, it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.1.1.12.8 One-Way Chi-Square Test (Test Of Goodness Of Fit)

One Way Chi-Square Test was administered to check the type of employment of respondents.

H₀₉: There is no significant difference in the proportion of type of employment.

H₁₉: There is a significant difference in the proportion of type of employment.

Table 4- 34 Chi-Square Test Statistics

Type of Employment	Observed N	Expected N	Residual
Permanent	48	52.80	-4.80
Contractual	64	52.80	11.30

Type of Employment	Observed N	Expected N	Residual
Outsource	85	52.80	32.30
Others	14	52.80	-38.80
Total	211	211	---
Chi-Square	51.009		
df	3		
Asymp. Sig.	0.00		

(Source: SPSS Output)

It may be inferred that p-value is $0.00 < 0.05$, which means the H_{09} is rejected. There is a significant difference between the observed and the expected value. As high as 163 respondents were working on other than permanent type of job. The trend of recruitment in public sector and private sector is based on contractual or outsourcing model.

4.1.1.12.9 Mann-Whitney U Test On Work-Life Balance

A Mann-Whitney U was applied to check the significant difference on work-life balance as perceived by unmarried and married respondents. Only one respondent was a divorcee in the entire data set. Considering the fact that she was married in the past, her marital status was transformed into married from separated, in order to administer the test on just two groups only. The hypothesis was framed as

H_{010} : Unmarried and Married females do not significantly differ in their opinion on work-life balance.

H_{110} : Unmarried and Married females significantly differ in their opinion on work-life balance.

Table 4- 35 Results Of Mann-Whitney U Test

Work-Life Balance Perception	Marital Status	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Sufficient Leisure Time	Unmarried	79	105.01	8295.50	5135.50	-0.19	0.85
	Married	132	106.59	14070.50			
Work Completion and No Overtime	Unmarried	79	103.46	8173.00	5013.00	-0.51	0.61
	Married	132	107.52	14193.00			
	Unmarried	79	101.52	8020.00	4860.00	-0.86	0.39

Work-Life Balance Perception	Marital Status	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp . Sig. (2-tailed)
Time with family and friends	Married	132	108.68	14346.00			
Important Social Benefits	Unmarried	79	103.19	8152.00	4992.00	-0.55	0.59
	Married	132	107.68	14214.00			
Time Balancing	Unmarried	79	93.94	7421.00	4261.00	-2.41	0.02
	Married	132	113.22	14945.00			
Work Flexibility	Unmarried	79	101.41	8011.50	4851.50	-0.92	0.36
	Married	132	108.75	14354.50			
No Work Burnt-Out	Unmarried	79	94.88	7495.50	4335.50	-2.20	0.03
	Married	132	112.66	14870.50			

(Source: SPSS Output)

The Sig. P-value for Mann-Whitney U Test in majority cases is more than 0.05, which indicates that the null hypothesis is not rejected. In other words, it may be inferred that unmarried and married females do not significantly differ in their opinion on work-life balance. It is a myth to believe that married women only face work-life balance issue. The unmarried women also face the issue of work-life balance, as she also had to shoulder the responsibility of dependents or might have to handle things single-handedly without the any support. As the Sig. P-value for the two work-life issues are less than 0.05, the null hypothesis is rejected. Unmarried and married women significantly differed on the issue of time-balancing with respect to work or non-work activities. If a married women is a mother, she would be spending lot of time in non-work activities, especially the child-care, which might not be the case with the unmarried women and hence, at this point both of them have different opinion. The respondents also significantly differed on performing the work without getting burn out. A person is able to work efficiently without pressure, if she is productive. The productivity is largely dependent on the cent percent concentration while working. The concentration might be hampered if some worries are nagging at the back of the mind. Usually, the married woman carries the domestic, children and household mental load, at the workplace, and so her attention gets divided and she experiences burn-out while executing her job. This might not be the case at workplace with the unmarried women.

4.1.1.12.10 Mann-Whitney U Test On Workplace Bullying

A Mann-Whitney U was applied to check the significant difference on workplace bullying as perceived by unmarried and married respondents. Only one respondent was a divorcee in the entire data set. Considering the fact that she was married in the past, her marital status was transformed into married from separated, in order to administer the test on just two groups only. The hypothesis was framed as

H_{011} : Unmarried and Married females do not significantly differ in their opinion on workplace bullying.

H_{111} : Unmarried and Married females significantly differ in their opinion on workplace bullying.

Table 4- 36 Hypothesis For Workplace Bullying

Workplace Bullying	Status	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asym p. Sig. (2-tailed)
Assignments Shifted To Male	Unmarried	79	96.84	7650.50	4490.50	-	0.03
	Married	13	111.48	14715.50		2.14	
Work Undervaluation	Unmarried	79	98.63	7792.00	4632.00	-	0.13
	Married	13	110.42	14574.00		1.51	
Work Assignment Below Calibres	Unmarried	79	96.01	7584.50	4424.50	-	0.03
	Married	13	111.98	14781.50		2.13	
Constant Work Monitoring	Unmarried	79	94.89	7496.50	4336.50	-	0.02
	Married	13	112.65	14869.50		2.28	
Verbal-Nonverbal Threats	Unmarried	79	101.2	7995.00	4835.00	-	0.18
	Married	13	108.87	14371.00		1.35	
Inappropriate Jokes/ Remarks	Unmarried	79	104.36	8244.50	5084.50	-	0.62
	Married	13	106.98	14121.50		0.50	

Workplace Bullying	Status	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asym p. Sig. (2-tailed)
No Information Sharing	Unmarried	79	94.96	7501.50	4341.50	-2.40	0.02
	Married	132	112.61	14864.50			
Exclusion From Workshop Activities	Unmarried	79	97.46	7699.00	4539.00	-2.07	0.04
	Married	132	111.11	14667.00			
Denial For Leave, Training Without Reason	Unmarried	79	97.81	7727.00	4567.00	-2.21	0.03
	Married	132	110.9	14639.00			
Impossible Deadline	Unmarried	79	97.32	7688.50	4528.50	-1.80	0.07
	Married	132	111.19	14677.50			
Spread Of Personal False Rumours	Unmarried	79	101.43	8013.00	4853.00	-1.05	0.29
	Married	132	108.73	14353.00			
Offensive Remarks Of Personal And Private Life	Unmarried	79	104.72	8272.50	5112.50	-0.33	0.74
	Married	132	106.77	14093.50			
Signals To Resign	Unmarried	79	103.85	8204.00	5044.00	-0.61	0.55
	Married	132	107.29	14162.00			
Repeated Reminders For Mistakes	Unmarried	79	103.25	8156.50	4996.50	-0.73	0.47
	Married	132	107.65	14209.50			
Neglect Of Opinions	Unmarried	79	102.78	8120.00	4960.00	-0.72	0.47
	Married	132	107.92	14246.00			
Compulsion To Attend Extra Meetings	Unmarried	79	99.03	7823.00	4663.00		0.09

Workplace Bullying	Status	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asym p. Sig. (2-tailed)
	Married	132	110.17	14543.00		-1.72	
	Unmarried	79	99.01	7822.00		-	
Use Of Disciplinary Or Competence As Threat	Married	132	110.18	14544.00	4662.00	1.72	0.09

(Source: SPSS Output)

The Sig. P-value for Mann-Whitney U Test in majority cases is more than 0.05, which indicates that the null hypothesis is not rejected. In other words, it may be inferred that unmarried and married females do not significantly differ in their opinion on work-place bullying. As highlighted in the table, the Sig. P-Value is less than 0.05, which indicates that the null hypothesis is rejected, it means unmarried and married women significantly differed in their opinion on work-place bullying with respect to the six items stated in the table.

4.1.1.12.11 Mann-Whitney U Test On Turnover Intentions

A Mann-Whitney U was applied to check the significant difference on turnover intentions as perceived by unmarried and married respondents. Only one respondent was a divorcee in the entire data set. Considering the fact that she was married in the past, her marital status was transformed into married from separated, in order to administer the test on just two groups only. The hypothesis was framed as

H_{012} : Unmarried and Married females do not significantly differ in their opinion on turnover intentions.

H_{112} : Unmarried and Married females significantly differ in their opinion on turnover intentions.

Table 4- 37 Results Of Mann-Whitney U Test

Turnover Intentions	Marital Status	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp . Sig. (2-tailed)
Thinking to Leave	Unmarried	79	97.50	7702.50	4542.50	-1.65	0.10
	Married	132	111.09	14663.50			
	Unmarried	79	109.75	8670.00	4918.00	-0.77	0.47

Turnover Intentions	Marital Status	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Exploring New Employment	Married	132	103.76	13696.00			
No Retirement Plans From Current Organization	Unmarried	79	106.75	8433.00			
	Married	132	105.55	13933.00	5155.00	-0.15	0.89
Choose to Work Again	Unmarried	79	100.00	7900.00			
	Married	132	109.59	14466.00	4740.00	-1.18	0.24
Exploring Similar Options Outside	Unmarried	79	106.97	8450.50			
	Married	132	105.42	13915.50	5137.50	-0.16	0.85

(Source: SPSS Output)

The Sig. P-value for Mann-Whitney U Test in all cases is more than 0.05, which indicates that the null hypothesis is not rejected. In other words, it may be inferred that unmarried and married females do not significantly differ in their opinion on turnover intentions. It may be inferred that unmarried and married females were quite comfortable working in the current organization and they did not wish to switch-over. In the literature too, it is often noted that if the employee is satisfied at the workplace, she may not have any turnover intentions and the attrition ratio of that organization would be low (Mynatt *et al.*, 1997).

4.1.1.12.12 Spearman's Rank Correlation Test

The eight construct which were measured using various statements, were transformed into one variable. The mean score of each construct was computed, when the construct was transformed into one variable and later correlation test was administered. As the data was not normal, Spearman's Rank Correlation Test was conducted on the data. The hypothesis were framed as under:

H_{013} : There is no correlation between work-life balance and turnover intentions.

H_{113} : There is a correlation between work-life balance and turnover intentions.

H₀₁₄: There is no correlation between training discrimination and turnover intentions.

H₁₁₄: There is a correlation between training discrimination and turnover intentions.

H₀₁₅: There is no correlation between pay and promotion and turnover intentions.

H₁₁₅: There is a correlation between pay and promotion and turnover intentions.

H₀₁₆: There is no correlation between leave policies and turnover intentions.

H₁₁₆: There is a correlation between leave policies and turnover intentions.

H₀₁₇: There is no correlation between career development and turnover intentions.

H₁₁₇: There is a correlation between career development and turnover intentions.

H₀₁₈: There is no correlation between work-place bullying and turnover intentions.

H₁₁₈: There is a correlation between work-place bullying and turnover intentions.

H₀₁₉: There is no correlation between job peculiarities and turnover intentions.

H₁₁₉: There is a correlation between job peculiarities and turnover intentions.

Table 4- 38 Results Of Spearman’s Rank Correlation Test

Correlation Between	Description	Statistics	Decision
Work-Life Balance ~ Turnover Intentions	Correlation Coefficient	-0.19**	H ₀₁₃ is rejected.
	Sig. (2-tailed)	0.01	
	N	211	
Training Discrimination ~ Turnover Intentions	Correlation Coefficient	0.36**	H ₀₁₄ is rejected.
	Sig. (2-tailed)	0.00	
	N	211	
Pay and Promotion ~ Turnover Intentions	Correlation Coefficient	0.35**	H ₀₁₅ is rejected.
	Sig. (2-tailed)	0.00	
	N	211	
Leave Policies ~ Turnover Intentions	Correlation Coefficient	0.28**	H ₀₁₆ is rejected.
	Sig. (2-tailed)	0.00	
	N	114	
Career Development ~ Turnover Intentions	Correlation Coefficient	0.37**	H ₀₁₇ is rejected.
	Sig. (2-tailed)	0.00	
	N	211	
Work-Place Bullying ~ Turnover Intentions	Correlation Coefficient	0.42**	H ₀₁₈ is rejected.
	Sig. (2-tailed)	0.00	
	N	211	
Job Peculiarities ~ Turnover Intentions	Correlation Coefficient	0.44**	H ₀₁₉ is rejected.
	Sig. (2-tailed)	0.00	

Correlation Between	Description	Statistics	Decision
	N	211	
* Correlation is significant at the 0.05 level (2-tailed).			
** Correlation is significant at the 0.01 level (2-tailed).			

(Source: SPSS Output)

It may be inferred that there was a negative correlation between work-life balance and turnover intentions, i.e. if there is work-life balance is low then turnover intentions would be high. For rest of the variables the correlation was noted to be positive i.e. the individual variables and turnover intentions moved in the same direction. In order to understand the type of correlation the online search was made and a video was explored to categorize the correlation. Based on the referred link, the categorization of the correlation was carried out and reported as under (<https://www.youtube.com/watch?v=tXD4Ny0DPOg>).

Table 4- 39 Identification Of Type Of Correlation

Correlation Between	Correlation	Categorized	Type
Work-Life Balance ~ Turnover Intentions	-0.19	-0.10 to -0.29	Negative and Weak
Training Discrimination ~ Turnover Intentions	0.36	0.30 to 0.49	Positive and Moderate
Pay and Promotion ~ Turnover Intentions	0.35	0.30 to 0.49	Positive and Moderate
Leave Policies ~ Turnover Intentions	0.28	0.10 to 0.29	Positive and Weak
Career Development ~ Turnover Intentions	0.37	0.30 to 0.49	Positive and Moderate
Work-Place Bullying ~ Turnover Intentions	0.42	0.30 to 0.49	Positive and Moderate
Job Peculiarities ~ Turnover Intentions	0.44	0.30 to 0.49	Positive and Moderate

(Source: SPSS Output)

It may be inferred that in the majority of the cases, the relationship was noted to be positive and moderate. It was positive and weak for leave policies and turnover intentions. A negative and weak relationship was noted between work-life balance and turnover intentions.

4.1.2 Women Working In Maritime Sector In Sea Based Jobs

This section analyzes the interview transcripts. It consists of maritime institutes and female students; motivation, family support and personal challenges being female seafarer; peculiarities of job as a women seafarer and policy level suggestions for increase in numbers of female seafarers.

4.1.2.1 Maritime Institutes And Female Students

It describes the quality of training, training challenges, restriction on female students, faculty behavior, male batch-mates behavior, campus placements, gender ratio and gender neutrality.

Table 4- 40 Maritime Institutes And Female Students

Sub-theme	Codes	Quotes
<p>Quality of Training: The Sub Theme indicates that the training provided at the maritime training institutes serve the purpose of equipping the women seafarers with necessary skills relevant to their Sea Job.</p>	<p>Codes with respect to Facilities or Training with respect to Female Students:</p> <ol style="list-style-type: none"> 1. Adequate Facilities and Infrastructure. 2. Training at Par with male colleagues 3. Knowledge and hands on experience. 4. Grooming and Personality development 	<ol style="list-style-type: none"> 1. We had, we had a compulsory workshop for three years. So we had to learn starting this, we started with machining, then we did the fittings, then we did welding, over welding, visit all these things. And we also did the blacksmith. And a lot of jobs. Which we would not have done in any normal colleges I'm sure. And these actually helped us even if now today, as I am second engineer, when I'm on board. (7) 2. Four Years of training groomed me like anything, college training is like paramilitary training so it changed the personality, confidence level, view point to see the different things like out of the world. (1) 3. Yes muscle power for ladies is less compared to muscle power of man but the maritime college train you well for that on how to deal with but it is physically demanding. (5) 4. Since you are good in academics you know for what you have come and what is the main thing that you have to do so for anyone, it is smooth training. (1) 5. All days u will be staying with all men and that is not exactly they taught us the college part, (5) 6. You know what we deal with in college made us so ready for the real deal. Like when went on board even now people ask me how will you sail like you know you say you are 22 peoples, all guys, I was like don't worry at all. And this is so much better. (7)
<p>Training Challenges: The Sub theme</p>	<ol style="list-style-type: none"> 1. De-motivation 2. Criticism. 3. Low representation. 	<ol style="list-style-type: none"> 1. When we joined maritime academy, company for the first time, like lot of de-motivation is there we are giving 100% from

Sub-theme	Codes	Quotes
<p>indicates various challenges in Maritime Training Institutes that the female students faced that were not faced by their male batch mates</p>		<p>our side but people are not giving such acceptance like we belong here. (3)</p> <ol style="list-style-type: none"> 2. Because first time when I joined the college there was so much bashing like girls cannot join, you cannot do, you have to quit. (3) 3. Due to gender I had lots of problems. On ship also & during my education also. People always tell us that you are a female candidate, you are not supposed to do this. We are physically strong but why people are keep telling don't do that. (2) 4. This one thing I have heard from seniors that they didn't expect it but we got this. (1) 5. Physically & mentally we are strong I think then man also. They have that kind of mentality that's why we had face problem. (2) 6. What we heard, and we faced and we had to, you know deal with (In training institute) made us so ready for the real deal (onboard sailing). (7)
<p>Restriction on Female Students : The Sub theme indicates various restrictions and limits imposed on female students in Maritime Training Institutes that were not applicable for male students</p>	<ol style="list-style-type: none"> 1. Timing 2. Monitoring 3. Additional guidelines 	<ol style="list-style-type: none"> 1. On Saturday Sunday when we use to get leaves we were specially being watched compare to boys. (1) 2. Being a girl when we step out of the college we have to follow the big formalities even we have to report to directors. Extra things that we have to face because we were girls, may be they were being protective for something. (1) 3. You have to stay there, it's in house training and you cannot come out of the campus, except for on Saturdays and Sundays. (5)
<p>Faculty behaviour: The Sub theme indicates the</p>	<ol style="list-style-type: none"> 1. Protective 2. Defensive 3. Questioning choice 4. Discouragement 	<ol style="list-style-type: none"> 1. Faculties were pleasantly surprised. Some of them are very supportive, some thoughts let's see what happens, there was no obvious negative behaviour from them. (5)

Sub-theme	Codes	Quotes
behaviour of faculty and their outlook towards female students in Maritime Training Institutes		<ol style="list-style-type: none"> 2. When we were in college, companies are denied to select us so when we joined college most of the faculties used to say why you took this profession. (3) 3. They did not allow us to appear, both of us. We never appear for any placement. (2) 4. They were like why you are doing this, when we are achieving practical knowledge of shipping they will be like you do not have to speak because you are a girl only, you will be working in kitchen why you have to do practical. (2) 5. College administration can only deal with things that are visible and open, underlined factors like mentality of male students they can't change, they can only give guideline to work upon. (5)
<p>Male batch mates behaviour : The Sub theme indicates that the behaviour and interaction of Male Batch mates towards their female students colleagues in Maritime Training Institutes</p>	<ol style="list-style-type: none"> 1. Friendly 2. Competitor 3. Critics. 4. Group mentality 5. Non acceptance 6. Questioning the authorities 	<ol style="list-style-type: none"> 1. Last year of college I got selected in leading cadet so there was a friction because boys were not accepting me as leader. (3). 2. My batch mates were good, they helped.(1) 3. Some are pleasant some are not so pleasant because a lot of people come from backgrounds where they have not seen women in such roles so they didn't know how to behave. They know there is nobody to protect her and accordingly their behaviour changes, she has to deal with everything face to face everything by herself. (5) 4. Every kind of challenge I have faced. From the family, even my batch mates not accepting. (4) 5. They are telling company is wasting money because they are giving you this much salary that's why they always used to tell like this. (2) 6. It should not be on just because you're a guy you should not be on the guy's side (7) 7. Everything we were doing just on par with our male counterparts. We were performing just like our batch mates, there was nothing special about it or there was nothing difficult about it. (8)

Sub-theme	Codes	Quotes
<p>Campus Placement : The Sub theme indicates that support during campus placement to female students by the respective Maritime Training Institutes</p>	<ol style="list-style-type: none"> 1. Campus Interview 2. College Support 3. Proper representation 4. Adequate companies line up. 	<ol style="list-style-type: none"> 1. They did not allow us to appear, both of us. We never appear for any placement.(2) 2. At my joining college gave me that confidence that you will get placed in that company, this company, they show lots of dream but after all they didn't allow me to appear for any placement in any company. (2) 3. My seniors they never got to sail. Only from my entire college, my college was established in 2011 then only 2 girls were able to join, like I joined in 2013. (3) 4. It is good that lots of women are joining in this field but companies are not taking girl candidate what if we join more girls but company is not taking girl candidate. Only having marine degree which is not benefit. (2) 5. My college, they never took interest in my placement or for my job. I was waiting for 2 years, struggled a lot then I got passenger vessel.(2) 6. I was very much confident about sailing then I sit in the campus placement and I got selected. (1)
<p>Gender ratio and Gender Neutrality: The Sub theme indicates the number of female students generally in courses vs. the male students in most of the Maritime Training Institutes in India</p>	<ol style="list-style-type: none"> 1. Number of male students in batches. 2. Number of female students 	<ol style="list-style-type: none"> 1. When I was in college and even today, it is maximum 3-4 girls not more than that. (1) 2. We were 5 in the whole college, only my batch had girls, there was 1 senior girl in the previous batch, only one girl and then after that we were 5 of us, so after us also nobody came. (8) 3. We had 2 sections 40 students were in both the sections Around 80 students were there & we were only 2 girls in nautical science & only 5 to 6 girls were in whole college. (3) 4. We were 3 girls out of 120 persons' batch. But we did it well. (4) 5. The barrier of girl and boy doesn't appear much. (1) 6. Course is mainly gender neutral. (1)

(Source: Researcher's Compilation)

4.1.2.2 Motivation, Family Support And Personal Challenges Being Female Seafarer

It describes the motivation to join Maritime Sector, Awareness about sector, support or resistance from family, life after marriage and life after kids.

Table 4- 41 Motivation, Family Support And Personal Challenges Being Female Seafarer

Sub-theme	Codes	Quotes
<p>Motivation to join Maritime Sector (Merchant Navy): The Sub theme indicates the reason and motivation for joining the niche job segment in Maritime being a female</p>	<ol style="list-style-type: none"> 1. Self 2. Parents 3. Relative 4. Friend 5. Mentor 6. Role Model 	<ol style="list-style-type: none"> 1. It was all my self-motivation when I heard about first girl from the same field in my college. I read all this about her in newspapers and articles I realized women really have to prove themselves in this career. (1) 2. A very close brother in law, and I was very much fascinated by the career that he had. So that was a prime source of motivation (5). 3. My father is also a chief engineer, like he used to. I only seen him going for sailing, and I was very young and by the time I was like two, three maybe four. (7) 4. In life my mindset was like I have to try different things, do the different things than the others what normally girls don't do so it was all self-motivation to join the maritime sector.(1) 5. My father he is the one who motivated me. He came to know from his friend who was a Captain. (2) 6. I did not want to become a typical, you know, tabletop engineer, a regular engineer. (5)
<p>Awareness about sector: The Sub theme reflects the awareness about the maritime sector specifically to girl students when they choose their career</p>	<ol style="list-style-type: none"> 1. School/College 2. Advertisement 3. Parents/Relative 4. Friends/boys 5. Merchant Navy officer 6. Lack of awareness 	<ol style="list-style-type: none"> 1. The main thing is the awareness. Most of the families, most of the students, or most of the people they don't even know about. (7) 2. No, not at all because most of my friends which are women they said you joined this field, what is this about they have no idea about this thing. They say ok, this is very interesting field like Air Force, armed forces. They vows that it is interesting field but they have no idea about this, there is very little knowledge about this field. (3) 3. Boys may be having knowledge regarding this but girls are not aware about merchant navy. Very little number of girls may be having idea about merchant navy. (3) 4. Girls can excel in this field, like they say but "where are the girls" and that is the main

Sub-theme	Codes	Quotes
		<p>problem comes like low number of girls they avoid considering this career as an option. (3)</p> <ol style="list-style-type: none"> 5. In my knowledge, people don't know what is merchant navy. 6. I heard term 'marine' from neighbour. (6) 7. I come to know from my father's friend. He came to meet my father. And he suggested. (4) 8. Yes. He came to know from his friend who was a Captain. (2) 9. No, many people don't know what is merchant navy. (2) 10. Nobody knows, I can tell you that is one of the reasons why we do not have more girls into this profession. (7)
<p>Support / resistance from Family : The Sub theme indicates that the support / resistance they received from their Parents while choosing their Career, during the training and being in the seafaring job</p>	<ol style="list-style-type: none"> 1. Supportive 2. Averse 3. Worried 4. Motivating 	<ol style="list-style-type: none"> 1. My parents have instilled a lot of a strong ambitious zeal in me that we know, it's important that we don't just exist, it's important that you have big achievements to yourself. (5) 2. From the beginning I always wanted to achieve something in whatever I do, while searching for my career role my parents helped me a lot (6) 3. I faced lot of resistance from all the family members because even boys didn't think of going in sea and choosing such career when I already had so many options. (1) 4. When I decided to join, it was important that my particularly parents support me. So there was a lot of resistance and the sense that people did not speak very highly about this, about making this choice (5) 5. My family were ok with me also because when I took admission in degree at that time I come to know this is only going to be my life, since then only I prepared my mind. (2) 6. I have seen many women who are sailing and when their houses, either the parents or spouse if they don't support, I have seen them having to crush their dreams and leave the job and look for the other avenues, as it is a crime to do this sort of the job. (5)
<p>Life after marriage:</p>	<ol style="list-style-type: none"> 1. Challenge 	<ol style="list-style-type: none"> 1. After marriage they faced real challenge. During the job, it was not felt. But, when they

Sub-theme	Codes	Quotes
<p>The Sub theme indicates the changes in professional and personal life of women Seafarers after the marriage</p>	<ol style="list-style-type: none"> 2. In-laws Supportive-Husband 3. Work Life Balance 4. Additional duties 5. Phobia 	<p>are into the marriage they face real challenge (4).</p> <ol style="list-style-type: none"> 2. She should be relaxed and she can go ahead with family. So it's not crime to have family. (4) 3. Yes, Yes, I am still sailing. My in-laws are Ok, My husband is OK. Ok, so your family doesn't have any problem. (4). 4. If I did not have understanding husband, understanding parents or In-Laws it becomes very difficult for women to continue their job without feeling guilty, without being victimise for issue which they have. (8) 5. When you are on voyage, you are on voyage, you cannot have work life balance, we use to finish all our family related work, bank work, office and related work based on the duration of voyage. (5) 6. That is the difficulties for us, especially the Indian woman because our duties are much more than the western countries, the western world. (5) 7. It's very easy for them to back off the family and move forward in the career. In such scenario, many females getting divorced, many are not adopting marriage because of phobia that she has to give up. (4)
<p>Life after Kids: The Sub theme indicates the changes in professional and personal life of women Seafarers during the pregnancy and after having kids.</p>	<ol style="list-style-type: none"> 1. Responsibility 2. Care 3. Lack of Support 4. Signing off 5. Maternity 6. Mother on board 7. Career 	<ol style="list-style-type: none"> 1. Now I am married so I even cannot think of leaving my child, I go on tour in this job also but it is not more than 2 or 3 days. But in voyage I have seen my seniors who have left sailing and went for shore job is because of child. (1) 2. It's very difficult to be the mother on board and manage things ashore, so they have a requirement it usually is your spouse and not the child so when the child is in trouble and if you want a sign off there are issues for emergency sign off. (5) 3. Woman have to take up maternity role or motherly role, they always have to debate whether it's there career or they have to choose between having a child and a career,

Sub-theme	Codes	Quotes
		<p>things are sadly still not improved so much for woman at sea yet. (5)</p> <p>4. Now you know you have move forward with your family. Those kind of questions comes, your mind is in dilemma as what to do next. This is a natural question that comes to mind that after having baby, what you will do. Either you will leave baby behind or what, those kinds of things come into the mind? That's the only thing. (4).</p> <p>5. There are many aspects with the female till now neglected. Females did not get appropriate platform. Male and female are different physically. Females have families to look after; they have to give birth to the babies which is an additional responsibility by nature to them. (4)</p> <p>6. The ambitious person neglects the family life or they are afraid to start family, because they think that they will have to give up the career because there are not much options are available only one straight path is to become Captain. Because she has also been through so much of patience, hard work and hardships then she realizes what for, for giving up the career. When end product is giving up than she realized why all such pain has taken. (4)</p>

(Source: Researcher's Compilation)

4.1.2.3 Peculiarities Of Job As A Women Seafarer

It describes recruitment and selection, company infrastructure, facilities and policies for women, male crew behavior with female seafarer on board, culture or mind-set, gender-discrimination or harassment, career management, emotions and feelings, satisfaction level and personal experience as a sailor.

Table 4- 42 Peculiarities Of Job As A Women Seafarer

Sub-theme	Codes	Quotes
<p>Recruitment and selection : The Sub theme indicates the female</p>	<ol style="list-style-type: none"> 1. Openness to hire Female seafarer 2. No female Hiring Policy 3. Rejection 	<ol style="list-style-type: none"> 1. Most of the company they did not recruited so it was very disappointing. (3) 2. "Oh sorry, you are a girl so we cannot take your interview and some

Sub-theme	Codes	Quotes
<p>recruitment policies of the companies as experienced and shared by female seafarers, the openness of companies for hiring or rigidity of non-hiring/Rejection of Women seafarers</p>	<p>4. Acceptance</p>	<p>companies they will say ok we won't hire you by just for your experience we can take your interview." (8)</p> <p>3. Recruitment most of them will not take women. They will call us they will talk to us and then they would say thank you so much. It was very nice meeting you but we do not hire women. (7)</p> <p>4. Also many companies do not have a transparent hiring policy, on the outside they will say "no, no" we will hire women if they are competent enough, but when they don't have policy for women on board, they hide behind that and say we don't have policies for women employee so we don't hire women. (8)</p> <p>5. See the challenge was, we were only 2 girls out of 140s batch. So it's like we were center of attraction everybody's eyes are on you. Whatever certificate you have to give them as a proof, they will pay keen attention and will get checked with much more attention than compare to other students. (1)</p>
<p>Company Infrastructure, facilities and policies for women: : The Sub theme indicates the company policies , facilities and Infrastructure whether it is suitable as per the need of Women seafarers or it is common without keeping the gender and</p>	<p>1. Medical 2. Sanitary needs 3. Accommodation 4. Gender neutral policies 5. Harassment policies 6. Safety</p>	<p>1. No, in the sense like medically also, we had no help like on board like for a woman specially nothing like even now that is so sad to say even now, especially on a cargo ship. (7)</p> <p>2. I searched for women specific in specific we have no administration of you know, medicals or anything, anything on both. So those are totally up to you. Like how you can how well prepared you can be for the situation. (7)</p> <p>3. Our sanitary needs are never priority for most of the shipping companies, till date even getting rid of our sanitary waste every month is a big problem for girls on board. (5)</p> <p>4. When you have harassment case on board, first of all many companies don't</p>

Sub-theme	Codes	Quotes
<p>specific needs of female in mind.</p>		<p>even have a proper way of how to investigate these things.(5)</p> <ol style="list-style-type: none"> 5. Some 4 or 5 men who are sitting in the board who are investigating on this issue. Which is a total false because the man can never understand what women has gone through and what is trauma, because these are a bunch of men sitting there who don't even understand how the women feel. (5) 6. Now, they have policy for women harassment policy for female seafarers. When I was going on board, they handed me a paper of women harassment policy and how this works. The one page has taken care of all and I live in peace. (4) 7. The safety was there being a girl candidate. (2) 8. Now, questions have come is, we don't have setup for girls. What kind of setup you want for girls? You have set of rules. All have to abide with comply the rules. The setup you need is, you have to keep your men in control. That the setup you need. That's all. (4)
<p>Male crew behaviour with Female seafarer on board: : The Sub theme as clearly mentioned highlights the behaviour of Male crew members on board ship with the female seafarers at various level being juniors,</p>	<ol style="list-style-type: none"> 1. Superiors behaviour 2. Co-workers Behaviour 3. Subordinates behaviour 	<ol style="list-style-type: none"> 1. They are protective. Like if they are sending me with chief engineer and 3rd officer then they will not be free and eyes will be kept on as female is going with you. So even in my friend circle they come with compulsion like come on time and go on time like that they be extra careful. So somehow freedom was lost. (1) 2. Yes, My Chief Officer and Masters have also told me that you can work, you are working equal to my boys, you are working here like a crew so they have also supported me & they used to say you will become an officer. (3) 3. They always say you are a girl this is not your field, switch to another job, now I am an officer I'll get to hear this

Sub-theme	Codes	Quotes
colleagues and seniors.		<p>why did you join you are a girl, find a job on shore, this thing is constant. (3)</p> <p>4. Ab kya hoga (what will happen when a female seafarer joins onbaord)that means the rest of them also will have the same kind of attitude towards me even before knowing me even before seeing the work. So this preconceived kind of thing, which I totally hate. But this has been over and over again, even now as a second. When they know my name (7)</p> <p>5. I have to cut my communication with others and I was not allowed to go out of my room. (3)</p> <p>6. With mal-intention they try to distract you, they try to tell you things in a wrong way, they try to give you more work, so you feel tired and then you go and tell them that “sir, please don’t do this to me”. (4)</p> <p>7. My colleagues are also not accepting me on board, “they said arrey ye kya aa gaya onboard (what has come onbaord), I said what do you mean by ye kya aa gaya, I told them don’t you know how many genders on earth” (4)</p> <p>8. Physical strength is required but crew members were there so nobody is alone. You do it in team. So team is there then you don’t need to worry. (1)</p> <p>9. Some of them have actually come and confessed to me that actually you know ma’am I did not expected this sort of professional approach and this sort of a smooth operation because you are a woman. (5)</p> <p>10. I was treated as a cadet not a women so any job which has given to me I could do. (6)</p> <p>11. Maybe second engineer’s wife or chief engineer’s wife on board, they will want me to come to their cabin and sit and</p>

Sub-theme	Codes	Quotes
		watch a movie. But that's not always the practical. (7)
<p>Culture/Mind set:The Sub theme indicates the overall culture and mind-set with regard to women as seafarers in the society and seafaring as an occupation, including the male culture prevalent in the job of seafaring and culture in India viz a viz countries apart from India (Mainly Western countries)</p>	<ol style="list-style-type: none"> 1. Societal 2. Occupational 3. Male culture 4. Western vs. Indian culture 	<ol style="list-style-type: none"> 1. People ask me how do you do this, can girls do this, it's a question that we still get but we have to brush it aside and continue doing what we are doing(5). 2. They have a lot of derogatory remarks from people to my parents that you know, why are you doing this? Is it just because of your money or something? Why are you letting your daughter go out to sea? Ye sare question ke unko javab dene pade (They had to reply for all this questions) (5) 3. It was very hard mentality of the people that female sailor they are not accepting. Passing that kind of comments, that you lost your confidence. (4) 4. Mentality that they should adopt. It take time to accept us as co-worker. Once they accept it is completely fine but this time period is bit difficult.(6) 5. They don't have any men who knows, how to work with female. In such atmosphere how to work with female. How to treat them. They have their own conventional ideas, but that things failed, you know. (4) 6. I have faced and every girl, (repeated) every girl faces that kind of comments. Because this industries is strictly men based. (4) 7. So it is always pleasure and proud to be in male dominant society.(6) 8. Our mentality is there, people have to change, people on board still tell women whom they come across as "array, what are you doing as a second engineer, you can never outperform us", or you can never perform as equal to us. (5) 9. If you say you do you make a mistake, the whole world will tell you that see this is why women can't do, whether I can do it or not they will judge the

Sub-theme	Codes	Quotes
		<p>whole womankind on how I will perform and how I do this, so that is some burden that we all women in this field have to bear, whether we like it or not but we have to bear these. (5)</p> <p>10. When I come on board and then they are like they will wish me good morning sir, then sorry good morning ma'am. Because people don't expect a woman climbing their ship. (5)</p> <p>11. As I said, Men are men so, they try to judge you at every steps. They take out the meaning which suits to themselves out of your word. It's all there. So, you have to take care about your language, your body language you're wearing. You can directly see in his eyes that, where they are staring.(4)</p> <p>12. See, you know how males are. There is advertisement also on men are men. So, men are men. It's you who stays with the fact. If you put feet back then, they will put their feet forward and you have to restrict them, you go back I go forward. (4)</p> <p>13. If I did not have understanding husband, understanding parents or In-Laws it becomes very difficult for women to continue their job without feeling guilty, without being victimise for issue which they have. That is the difficulties for us, especially the Indian woman because our duties are much more than the western countries, the western world. (5)</p> <p>14. Yes, their mentality. (2)</p> <p>15. Who will go convince their parents well, she's still in school. So she still has no say this is India here we usually have no say and we are choosing a profession or you know, till you are outside your home even people don't leave their home till very long. (7)</p>

Sub-theme	Codes	Quotes
		<p>16. Indian companies of coastal navigation, work culture is fine but that mentality that they should adopt that thing is quite lagging. It take time for people to accept us as a co-worker, colleagues. Once they accept it is completely fine but this time period is bit difficult. Even some people doesn't accept it for long time. That should change. (6)</p> <p>17. Indian people don't know what mentality they have, they never accept woman ordering them. (2)</p> <p>18. So as women on board it will be very difficult to be typical mother and typical daughter-in-law of the house. They will be out for most of their anniversaries, birthdays and whatever the home duties puts up a big punch. (5)</p> <p>19. In other countries like Australia and America. The things are on advanced level. They have platform for every kind of person. (4)</p>
<p>Gender discrimination/ harassment : The Sub theme indicates discrimination women seafarers undergo due to their gender on board at ship and harassment they face being female</p>	<ol style="list-style-type: none"> 1. Acceptance 2. Assistance 3. Acknowledgement 4. Non Supportive 5. Over Supervision 6. Assignments of duties 	<ol style="list-style-type: none"> 1. They never send any girl cadet on tanker vessel they send only on passenger vessel. (2) 2. They were like, you don't do this because you have to get married. (2) 3. They tell me that Tera jab name aaya toh(when your name came), so these guys are not even ready to believe it's a woman, they were like pakaa inhone galti se miss.likha hongga (they must have written miss by maistake)(7) 4. Due to gender I had lots of problems. On ship also & during my education also. People always tell us that you are a female candidate, you are not supposed to do this. We are physically strong but why people are keep telling don't do that. (2) 5. Yes, as a junior, may I as I told you before also they were people who they will senior officers. They did not want to work alongside me or they did not

Sub-theme	Codes	Quotes
		<p>want me along them when they were working. Which was very difficult because I would not know because they would not tell me they would come and tell second engineer that don't send her with us, we will not work with her, I don't want to show her anything. But why? There is no answer to it even today. That's why this attitude (7)</p> <p>6. I am physically strong, I am preparing myself for 3-4 years, trying to fit myself, let us do our job. (2)</p> <p>7. We are a thin so we can go in any stage and work. I don't know what they are having in their mind. (2)</p> <p>8. He was not able to do so I went & I did that work because I am thinner than him. (2)</p> <p>9. No no they never accept. (2)</p>
<p>Career Management: The Sub theme indicates the Career of female seafarers in the job, various stages of career and associated peculiarities related to the same.</p>	<ol style="list-style-type: none"> 1. Lack of Management 2. Promotion 3. Higher responsibilities 4. Mid-Career Management 	<ol style="list-style-type: none"> 1. By reaching to masters it's take about 11 to 12 years. At the age they reach to the stage where they can learn something new. When you are 30-31 you want to continue with the present situation. Why to struggle. Switching is least preferred option at this stage. So, it's very easy for them to back off the family and move forward form this stage. (4) 2. This is the reality and people are not want to talk about. And every one expecting professionalism. But professionalism only comes when your work and social life is balanced. (4) 3. Professionalism comes from the family, for the family. (4) 4. Yes, we cannot neglect life because of profession. (4) 5. I am still sailing. I'm married and still feel, luckily my in-laws are Ok, and my husband is OK. Sooner or later, I have leave the sailing. Because it just a nature. I have to move forward with my family. (4)

Sub-theme	Codes	Quotes
		<p>6. You are letting go family for the career, then what will you do with the money? And you are female and not a male. So, you will have kids in time otherwise you will have problem in future. Then what you will you do, as much as you have earned, that will go for the medicines and health. (4)</p> <p>7. My second engineer he never allow us to do any kind of technical job, he used to involve us only in paper work only. Means they don't allow us to do any technical work. (2)</p> <p>8. My goal to become master then only I will try to switch then only I will try other jobs related to maritime. (3)</p>
<p>Emotions and Feelings: The Sub theme indicates the emotional journey and feelings that a female seafarer undergo while she is on ship due to the nature of job.</p>	<ol style="list-style-type: none"> 1. Isolated 2. Lonely 3. Fear 4. Stress 	<ol style="list-style-type: none"> 1. At that time no one prefer to talk with girls. So I could not cope up at that time. At that time I socially isolated. (3) 2. There is kind of isolation. (4) 3. Then we were sharing the same mess room we were I was spending most of my time the ball house lonely interacting with them. (5) 4. I would literally like to have a lady companion with whom I can share my thoughts but then that is not the reality as yet. (5) 5. If we talk about typical female things then yes there is no female to share your feelings with. (1) 6. I used to be sad and all (7) 7. Not, fear but confrontations I faced. Because they used to scare me. (4) 8. If there is a problem you have to reach out to them, you have to talk to them. Whether it's good or bad you are in between them for that voyage. (5) 9. People you have to pull on even if there is some face you don't like on the ship you have to manage. You have to bond with the people there, otherwise you will never get that comfort. (5)

Sub-theme	Codes	Quotes
<p>Satisfaction level and Personal experience as a sailor: The Sub theme indicates the level of satisfaction and experiences at personal level that a female seafarer feels from the time of entering into the maritime sector and thereafter.</p>	<ol style="list-style-type: none"> 1. Happy 2. Elated 3. Dissatisfied 4. Motivated 	<ol style="list-style-type: none"> 1. I was enjoying my first sail, like a child has got a new toy to play with, I literally enjoyed. As far as job is concerned I still enjoy it. (4) 2. I would like to tell that we got placed on ship, we were two girls but when I completed my training in last month I was the single girl on board I felt like a queen. Working among 20 man, I know my worth, (6) 3. If I see my journey so far, I'm very happy and satisfied with the choice I made, much contended. Off course there are more milestones to achieve. That I think it's a combination there were hardships there were challenges but then overall it's a good experience. (5) 4. So even today someone ask me to go for sail, it would be lovely to go. If I couldn't aspired for doing something great and take leadership then shipping was best career for me. I would never left shipping. (1) 5. Women still have to outperform, they cannot be an average person on board like everybody else. They have to outperform to even survive, because if you are just an average person you will get much more criticism and judgment because of your gender. (5) 6. Many masters have come and told me today operation has gone so well, I am so grateful for what you did. (5) 7. I've never sailed with other women on board (7)

(Source: Researcher's Compilation)

4.1.2.4 Policy Level Suggestions For Increase In Numbers Of Female Seafarers

It describes policy level suggestions for increase in participation and better culture.

Table 4- 43 Policy Level Suggestions For Increase In Numbers Of Female Seafarers

Sub-theme	Codes	Quotes
<p>Policy level suggestion for</p>	<ol style="list-style-type: none"> 1. Company Policy 	<ol style="list-style-type: none"> 1. Long term placement, see women are not like men. They have maternity period and wedding

Sub-theme	Codes	Quotes
<p>increase in participation and better culture: The Sub theme indicates various policy level changes suggested by the women seafarers that will help in increase in number of participation of female employees in the maritime sector</p>	<p>2. Government Policy 3. Career Management 4. Examination Pattern.</p>	<p>thing, that kind of facilities should be provided by the company and all so the company should provide all these leave. That should be provided. (6) 2. If you add female member is crew it will add better decision making and different point of view, she would be calm.(1) 3. If you link up this exam with some great exams then to spread awareness it would be helpful. (1) 4. If platform which is pre-decided, in such case once she felt that her hard work won't go waste. Even if she married, she feels relax way. (4) 5. Yes, they can handle. But if the environment is better she can regain their confidence. (4) 6. This field is lacking the gender diversity. When the problem comes then we start finding solution. Till the time only males are there in the field they will not face any problem, so what they will understand about it. (4)</p>

(Source: Researcher's Compilation)

SECTION-II RECRUITERS' INTERVIEW

This section analyzes the interview transcripts. It consists of recruitment and company policy; job types, challenges and availability; perception, barriers and reason for low number of women seafarers; performance and acceptability of female employees and suggestion on policy level changes for more female employment.

4.2.1 Recruitment And Company Policy

It describes the recruitment process and policy for hiring female employees.

Table 4- 44 Recruitment And Company Policy

Sub-theme	Codes	Quotes
<p>Recruitment Process: The Sub Theme indicates that the company recruitment process like through Campus</p>	<p>1. Outsourcing Model/Contractual 2. Campus Interview 3. Licenced recruiter 4. Advertisement/ Reference 5. Medical Test</p>	<p>1. We are providing manpower to ship, shipping industries. More or like an outsourcing model where the entire payment and everything is being done by the organisation, but the short-listing and remaining other processes are being done by us. (1) 2. We used to go to the different colleges to recruit engineers and diploma students who are there in their final years. (1)</p>

Sub-theme	Codes	Quotes
<p>direct, Advertisement etc. and the various stages involved.</p>		<p>3. We are hiring from college campus. (4) 4. RPSL Agency(Recruitment and Placement Services Licence) recruitment.(1) 5. Advertisement dete hai aur reference se bhi hotahai. (With advertisement and also with reference) (3) 6. It's a long process of joining. In the medical they fail sometimes, and sometime they are changing their mind as well. Initially they are giving the interview at that time their mind set are different and while they are reaching home and after few months, (1)</p>
<p>Policy for hiring Female Employees: The Sub Theme indicates that the company policy regarding hiring of Female Employees.</p>	<p>1. No Hiring 2. Limited Hiring 3. Less Numbers</p>	<p>1. Multiple times: “No” to hiring Female (Above 70% Respondent)</p> <p>i. As a port if you said we don't employ females. (2) ii. No, most of the, 98 percentage companies are saying “No for females”. Remaining two percentage those shipping companies who are having a cruise work. So over there they need few female employees compulsory. (1) iii. No, no, we don't No, no, no girls are there. (5) iv. Yes, there are lots of working on the ground job but on ship job females are not. (1) v. Last year January me kiathauskebaad se nahihai. (We did last female recruitment in January now we don't recruit)(8) vi. No, because of current manpower requirement is very low. vii. Non availability as per our requirement (3)</p> <p>2. Generally if 60 people are applying 10-12 girls are only apply for that. (4) 3. Not adequate but less than the men. (4)</p>

(Source: Researcher's Compilation)

4.2.2 Job Types, Challenges And Availability

It describes the job types, challenges specific to maritime sector, challenges specific to female in maritime sector and availability and interest.

Table 4- 45 Job Types, Challenges And Availability

Sub-theme	Codes	Quotes
<p>Job types: The Sub Theme indicates the type of jobs in maritime sector where female are hired including both Sea and Non Sea based jobs.</p>	<ol style="list-style-type: none"> 1. Back office/Port Jobs 2. Cruise Job 3. Passenger ships 4. Core Engineering 5. Port related 6. Male specific job 	<ol style="list-style-type: none"> 1. There are lots of other posts available (For females), like purser post, accountant post, then hospitality management, waiters, so many other, cook. That type of posts available, where female can join and they can work. (1) 2. Computer, Finance, most of them are in the admin team, so they are either secretary or they manage transporting stuffs, there are two women in operations, one in maintenance. (6) 3. Like on reception, sometimes cook, hospitality management, so there compulsory they required a female. If they are not getting a female then they are hiring a male. But the first preference is female. (1) 4. Yes, in mechanical and electrical they were there. (8) 5. Core engineer there are people. (6) 6. Women's are not joining merchant navy industry but yes they are doing work on ground on some ports. (1) 7. No, there are no man specific jobs. Nothing like that. (6)
<p>Challenges specific to Maritime Sector: The sub theme indicates the various challenges that are inherent to the job in maritime sector as highlighted by the recruiters.</p>	<ol style="list-style-type: none"> 1. Lack of Sleep 2. Pirates 3. Rolling, Pitching, Rough Sea 4. Sea Sickness 5. Frustration 6. Food and issues for Vegetarian 	<ol style="list-style-type: none"> 1. Suppose ship is moving from India to Dubai it will take 15 days. Now most of the time on ship people they are in a rolling pitching atmosphere everywhere you can see water, water, water you will not get the good sleep, you will not get the good food of your choice all the time. (1) 2. Male crew members near the Somalia still in today's date as well people are hijacking this ships so you can imagine what will happen with the female. "It is creating havoc for the sea farer." (1)

Sub-theme	Codes	Quotes
		<p>3. On a ship rolling pitching atmosphere it's not a proper thing. And when it's a rough sea, situation is 60 degrees ship is moving. So the person whose staying inside there can be sea water is coming in to their cabin. So it's very tough job, on ship job. (1)</p> <p>4. There are lots of things they are facing due to that they are getting frustrations and in the frustration if they find it out the female right on the ship they may not control and may be the crime may happen.(1)</p> <p>5. If you and me over there, we come frustrated and, they are fighting with each other's sometimes. Just imagine that 20 days 40 days they are not getting a food of their choice. (1)</p> <p>6. You will not get the good food of your choice all the time. (1)</p> <p>7. So on ship it's very difficult for veggie people. (1)</p>
<p>Challenges specific to Female in Maritime Sector: The sub theme indicates the various challenges that are inherent to the job in maritime sector, specifically for women as highlighted by the recruiters.</p>	<ol style="list-style-type: none"> 1. Remote Location 2. Night Operation 3. Long Voyages 4. Social Distancing 5. Long Family Separation 6. Obstacle to Family Planning 7. Maternity 8. Mid-career 9. Security Issues 	<p>1. Locational Disadvantage multiple times (More than 80 % respondents).</p> <ol style="list-style-type: none"> i. Generally the location is also difficult challenge like location is a bit of a challenge like a lot of places. (6) ii. Initially the hitch has been difficult remote location, difficult job, unfavourable condition that has prevented but now things are changing. (2) iii. Sometimes Location place major role. If my port is metro city or if the port is Mumbai, then the number of people interested in my port is more. But, in case of Hajira, Surat the ratio is decreased. (7) iv. Further onwards their career after marriage, having kids it becomes a bit problem for them to stay on site and specifically for most location. (6)

Sub-theme	Codes	Quotes
		<p>v. Gharlautkejananahihai. You place of residence is also there so ekaadamaiaayega, vo ladies aayegi to usakeliye problem hai. She cannot go back home. (3)</p> <p>2. Night Operations/Shifts Multiple time.</p> <p>i. Before the codes there was the late working was a problem and you have to take special permission and that was always challenging for the night shifts codes. Now the codes sort of are changing that little bit and they are being permissioned. (6)</p> <p>ii. You only saw on the ground perspective that are challenges specifically finding woman who will do night shift operations or the evening ship traffic Like currently how we work is the people in operation are in morning shift only so the night shift codes are can be able to challenges, it's from safety point of view. (6)</p> <p>iii. Aurhumne strictly mana kiathaki there were no night duties for females. (We strictly told them not to do night duties)(8)</p> <p>iv. I think the shift timing and your location plays a big role. (6)</p> <p>3. Family Obligations/limitations: Multiple times around 70% respondents. Any female is having a three years minimum, two to three years gap in the time of their pregnancy and they have to give a time to their kid. (1)</p> <p>i. Female is employed and after five years of service she has to get married and settle down in family all such things go for haywire. (2)</p> <p>ii. I think locational disadvantage people are comfortable with the first part of the career but after that</p>

Sub-theme	Codes	Quotes
		<p>family obligation gets to do a bit of challenge. (6)</p> <p>iii. I think early career is still okay but mid-career gets a bit complicated if you are doing core operation at that time. (6)</p> <p>iv. Even if they join at some stage they will quit, because if it is a job where you are not coming home and you cannot keep the kids on the ship. That is one limitation. (3)</p> <p>v. Female officers have family issues also. It is not possible for them to shift entire family. (7)</p> <p>4. Safety and security aspect multiple times (100 % respondents).</p> <p>i. While hiring female associate, irrespective of on role or contractual, a very much concern about their safety. (7)</p> <p>ii. Though in rolling pitching atmosphere, in the rough sea, though they are not getting a chance to not be on ground, food, everything they are happy to adjust, but security is the main concern. (1)</p> <p>iii. No. It's totally our responsibility if anything happen on a ship. We are responsible to give the answers. (1)</p> <p>iv. "on ship job females are not mainly because of the security reasons"(1)</p> <p>v. I think the safety aspect at the personal level. (6)</p> <p>vi. Long time away from family, industry doesn't appear very safe. (6)</p>
<p>Availability/Interest: The sub theme indicates availability of Females in maritime sector and their level of Interest in joining the sector</p>	<ol style="list-style-type: none"> 1. Not an Option 2. Limited Resource 3. Lack of Supply 4. Less Recruitment 	<ol style="list-style-type: none"> 1. Most of the time females are not happy to join except these Tamilians. (1) 2. It's not like that, openings for female associates. However, there interests and participation also should be there. For example, if there is an opening of Chartered accountant in Mumbai, then I

Sub-theme	Codes	Quotes
		<p>can get multiple female associates. But for Surat, entries are limited. (7)</p> <ol style="list-style-type: none"> 3. Apart from that, the female candidates who are willing to operate or enter into this industry is very less. (7) 4. But maritime is not factor where woman look at after schooling. (6) 5. Limited availability we get like we were looking for with some lady officers, girl, lady officers. (8) 6. As woman I can say that we need to give more opportunities to women so that they can financially and other ways they can be empowered. For their better life and for their family also.(4) 7. It's all demand and supply basically what you need someone to justify that work. (5) 8. Yes, problem of supply. (3) 9. Because of the not recruitment. For Recruitment Sufficient manpower is already available, so job is not available may be you can say. (4)

(Source: Researcher's Compilation)

4.2.3 Perception, Barriers And Reason For Low Numbers Of Women Seafarer

It describes the occupational or sea faring culture, male culture, society and Indian culture, Gujarati culture and lack of awareness.

Table 4- 46 Perception, Barriers And Reason For Low Numbers Of Women Seafarer

Sub-theme	Codes	Quotes
<p>Occupational/ Sea Faring Culture : The sub theme indicates the barriers and reason for low number of Women seafarers due to the inherent culture of the occupation and seafaring</p>	<p>Rules/Regulations</p> <ol style="list-style-type: none"> 1. Merchant Navy 2. Long Voyages 3. Separation 4. Pregnancy 	<ol style="list-style-type: none"> 1. In merchant navy there are lots of rules and regulations of different countries rules and regulations are different. Suppose ship is moving from here to Pakistan through Karachi, Karachi to somewhere else. So while they are entering in to Pakistan rules are different, while they are entering to UAE rules are different. So it's not that easy to control people who are working on a ship. So that's why we are not recruiting. (1)

Sub-theme	Codes	Quotes
		<ol style="list-style-type: none"> 2. You have to start with a very low level that is called GP level (General purpose), that is one rank, so from that particular point he has to take the experience and then they can reach to some level. But after engineering you can be a fourth engineer or something but you cannot be a chief engineer directly that you have to take the experience, you have to give government exams. Each and every countries having their particular exams COC exams. Than you are getting a promotion than you can reach to the Captain or a Chief engineer. (1) 3. 3 months to 6 months to nine months. They are not getting a time or chance to be on a land. (1) 4. If she's pregnant she cannot go on a ship. So working on a ship is total different and it's not suitable job for the female. (1)
<p>Male Culture : The sub theme indicates the Male dominance and culture that is inherent to seafaring historically and leading to the limitation or barriers in joining of women in the sector</p>	<ol style="list-style-type: none"> 1. Historical Male dominant 2. Male Mentality 3. Physical Strong 4. Unacceptability 	<ol style="list-style-type: none"> 1. Some males are also dominant in their function, they are not supporting to women employees, and they don't give them opportunity to perform. (4) 2. People they are not harassing them or not misusing the authority or misusing the male mind mentality sort of thing. (2) 3. Linkdinpeek requirement dalatha to usmebahot sari comments aayithiki (On posting a requirement for female on linkdin) why are you taking females so many males are available not taking them. (8) 4. When it comes to technicality or major technicality the gender ratio is very less. (7) 5. Even having many barriers inequality and some biases is also there and some captive work condition. (4)

Sub-theme	Codes	Quotes
		<ol style="list-style-type: none"> 6. When you compare male and female, female are always mentally strong then the male. But when it comes to a physical work they cannot compare with the male work. (1) 7. I think if both husband and wife are having career in same field than its like makes sense, but the probability of that is very low and specifically maritime. (6)
<p>Society and Indian Culture: The sub theme indicates the impact of society and culture in India that limits the women in joining the Maritime career or reason for leaving their career midway.</p>	<ol style="list-style-type: none"> 1. Indian States 2. Mind-set 3. Motherhood 4. Parents 5. Indian vs. Foreign 	<ol style="list-style-type: none"> 1. It's just because of the Indian culture the girls are apprehensive to go on ships. (8) 2. India is an evolving country. If you are employing a female and then you have to provide all that security, not only physical, but that emotional security also. (2) 3. This is the mind-set, this is an Indian mind-set there is no job which a female cannot do. (2) 4. In my own experiences yes, there is a change in mind-set of people also, now they are more open to employ female, but still India has to go a long way. (2) 5. First of all the mind-set or the policy of the organization whether they want to recruit or not. (2) 6. Yes the mind sets that are woman can't do. (4) 7. The percentage of woman have broadly remain the same has acceptance increase or the culture has changed. (6) 8. It's not very fit to be open towards allowing women trend, like we really don't also have any big story from out of the sector which can be seen as an inspiration. (6) 9. Motherhood is a motherhood, father cannot take the place of the mother. (1)

Sub-theme	Codes	Quotes
		<p>10. Parents vagerako b darlagtahaikiladkiko suddenly 8-9 mahinehamriankho se durrahegiaurkyahogauskesath me kondekhega, konsambhalega. (8)</p> <p>11. So their culture is different. Indian females are not that bold compare to western female.(1)</p> <p>12. There are lots of females they are working, but they all are from the different culture but not Indian culture. (1)</p>
<p>Gujarati Culture: The sub theme indicates the culture in Gujarat which is different from the rest of states as per recruiters and leading to lower number of females joining the sector</p>	<p>4. Vegetarian 5. Love for food 6. Business Acumen</p>	<p>1. Second thing food, weakness is food, if they are not getting Gujarati food they will not feel comfortable, they cannot adjust and vegetarian people. (1)</p> <p>2. You will find it 70% people are vegetarian. So on ship it's very difficult for veggie people. So these are the barriers for the females who are from Gujarat but rest of the part few people are working, few females? Tamilians are working, Punjabi, Hariyana they are working on ship. (1)</p> <p>3. Punjab, Haryana, over there females are eager to join and they are ready to take the challenges. That region is totally the different one. (1)</p> <p>4. In Gujarat if you compare, Gujarati people they are family and more over business minded person. They don't want to do the job. They feel something different. (1)</p> <p>5. While you are going to Punjab or Haryana people after 10th class after 10 plus 2 after graduation, they are keeping this industry, this career opportunity in their mind. (1)</p>
<p>Lack of awareness : The sub theme indicates that there is very low level</p>	<p>5. Source 6. Lack of knowledge 7. Under graduate</p>	<p>1. Less awareness is leading to, those who are in 10th or 12th are not aware of, our under graduates are not aware of. (4)</p>

Sub-theme	Codes	Quotes
of awareness about the maritime sector and that is the reason for which the sector is not considered as a career option initially leading to low number of females joining the sector	8. High school and Higher secondary.	<p>2. Make them aware that Okay, this is also an area where you can join. So, that awareness has to be created and then that openness has to be there from the organization side. (2)</p> <p>3. Maybe they don't have much idea how to approach for the source actually. (5)</p> <p>4. Awareness about the maritime sector is an issue. (7)</p> <p>5. We are simply quoting that such graduation in marine require 10 year experience is required, if they have completed the courses and they are aware about the qualifications so automatically get selected. (4)</p>

(Source: Researcher's Compilation)

4.2.4 Performance And Acceptability Of Female Employees

It describes the performance satisfaction and quality of females.

Table 4- 47 Performance And Acceptability Of Female Employees

Sub-theme	Codes	Quotes
Performance Satisfaction : The sub theme indicates the overall performance rated by the recruiters about the females working with them in Maritime sector	<p>1. Up to the Mark</p> <p>2. Lower than expectation</p> <p>3. Higher than expectation</p>	<p>1. The ratings have always been above the average there our experience have been great. (6)</p> <p>2. Kisi b female ne hamenahi bola kehamkoyeh work restriction chahiye, they were asking kijoladkekarakte h vohhumlogkyunahikarsakte. (8)</p> <p>3. Women contribution in the organization is valuable. Most of the senior associates are there in the organization are loyal and committed to the work in terms of their working tenure. Their tenure with the organization is 3-5 years. So, there stability is very good. (7)</p> <p>4. In most of the case, affirmative. (7)</p> <p>5. Yes, Very much satisfied with their performance (2).</p> <p>6. Yes, satisfied. (4)</p>

Sub-theme	Codes	Quotes
<p>Quality of Females : The sub theme indicates the qualities highlighted by the recruiters about the females working with them in Maritime sector and the reason to hire them in the sector</p>	<ol style="list-style-type: none"> 1. Different perspective 2. Various solutions for problem 3. Behavioural Mix 4. Mentally Strong 5. Emotionally Strong 6. Trustworthy 7. Dedication 8. Above Average 	<ol style="list-style-type: none"> 1. Female's nature they are emotionally, mentally they are stronger than the male. For sure. Females are the riders of everything. If you see at the end of the day male is going to surrender to the female. Females are mentally stronger, emotionally stronger which required on a ship. In that atmosphere, while you are not getting a chance to be on ground for 3 months- 6 months. You need a mental power, mentally you must be strong then and then you can work on a ship. (1) 2. First one is mentally strong, plus dedicated to their work. Females mostly, what I find it out is if they decide to complete the work, they do that. You can put a trust on them for that work. (1) 3. Woman has a very dedicated towards the work, she should be (is the) honest, hardworking especially, her dedication towards the organisation (function). (4) 4. Dedication, commitment towards the job, they are disciplined, they bring a different perspective to any problem. (2) 5. Female will definitely bring a different perspective or solve any problem that is the biggest quality. (2) 6. Females always brings a balance. (2)

(Source: Researcher's Compilation)

4.2.5 Suggestion On Policy Level Changes For More Female Employment

It describes the policy suggestions.

Table 4- 48 Suggestion On Policy Level Changes For More Female Employment

Sub-theme	Codes	Quotes
<p>Policy Suggestions: The sub theme indicates various suggestions and policy level changes highlighted by the recruiters interviewed that may lead to increase</p>	<ol style="list-style-type: none"> 1. Government Policy 2. Organisational Policy 3. Educational Policy 4. Hiring Policy 5. Awareness 	<ol style="list-style-type: none"> 1. If government is making it compulsory or something than it may happen. (1) 2. As part of CSR (Corporate Social Responsibility) either you keep family on board or you keep two females on board. (8) 3. We don't have any policy. But if government is applying or imposing which is good thing. Now, organization

Sub-theme	Codes	Quotes
in number and participation of female employees in Maritime sector		<p>is not discriminating in terms of Female or Male employees. If Government is applying, we are very much happy to accept it. (7)</p> <ol style="list-style-type: none"> 4. Government policies are not binding but our own vision of having minimum 10% of gender equality by 20/30. (4) 5. Only Indian government are changing rule it will make no difference. If globally make a rules then it make difference. (1) 6. As such, as an organization they does not have any Gender Neutral Policy, but the organization does not differentiate between male & female. (7) 7. Girls need to be given attractive offer and education need to be given. (4) 8. This is a policy, it was the policy but now we have started hiring but that is also with all due approvals. Therefore, our percentages may be less. (2) 9. So the change has happened the government policies are also in favour of them and some awareness also happened like, POSH act (prevention of sexual harassment) at work place, at 2013 so such types of actions are in favour to the woman employees and that's why now scenario has changes. (4)

(Source: Researcher's Compilation)

SECTION-III EXISTING STUDENTS

The present section is Section-III, which tries to study the opportunities and challenges of existing students and alumni. The data analysis broadly comprises of Demographic Analysis, Course Details, Institute and Courses, Duration and Fees, Awareness about the Course, Job Location and Preference, Opportunity and Challenges (Non-Sea Based and Sea-Based) and Future Expectations and Growth.

4.3.1 Demographic Analysis

It consists of analysis on Age, Gender and Educational Qualification.

4.3.1.1 Age

On a nominal scale the respondents were asked to tick mark the appropriate inclusive age group.

The groupings of age were from 18-25 years till 46 years and above.

Table 4- 49 Age Of The Respondents

Age Group	Frequency	Percentage
18-25	119	94
26-35	08	06
Total	127	100

(Source: Excel Output)

It was observed that 119 respondents belonged to the age group between 18-25 years. Only 8 respondents belonged to the age group between 26-35 years. It may be inferred that as high as 94% belonged to the conventional age-group of 18-25 years. As per the conventional Indian Education System, a pupil completes his/her 10th standard schooling at the age of at least 15 years and 12th standard schooling at the age of at least 17 years. He /she could become eligible for college level education at the age of at least 18 years. An average student is expected to complete his graduation by 20th year and post-graduation by 22nd year.

In the maritime course offered by various institute a student is eligible to take admission even after his 12th standard schooling. So, the age group put in the questionnaire starts with 18 years. If a pupil is pursuing his master level course it is expected that he would have completed by 22 years. A higher age limit up to 25 years was put in the interval to accommodate even the below average students. It may be inferred that students pursuing the maritime course have completed the conventional course, cleared the basic eligibility criteria and have then enrolled in the niche course. Thus, the cohort group was reflected in the age-group of 18-25 years. Only six percent were in the age-group of 26-35 years. It may be inferred that such pupils might have enrolled in

the maritime course, after a gap. In the qualitative telephonic discussion it was known that students pursued a job after the fundamental schooling or college education, gained the experience and later enrolled in the course for better prospects. Thus, such numbers of pupils were handful who assumed a books and bags routine after the gap in studies (Thomas *et al.*, 2003).

4.3.1.2 Gender

A categorical question was raised to the respondent to know the gender. Male, Female or Transgender were the options put to avail the response.

Table 4- 50 Gender Of The Respondents

Gender	Frequency	Percent
Male	98	77
Female	29	23
Total	127	100

(Source: Excel Output)

98 respondents were male and 29 respondents were female. It may be inferred that as high as 77% male were enrolled in the maritime course. Only 23% female were enrolled in the course. Maritime course is a niche course, which provides job opportunity in sea-based and non-sea-based segment. The sea-based jobs involve long distance travelling and remaining aloof from home, is often looked upon with a stereotype as a non-preferred job for women. Thus, enrollment of female for such a course is very less. The social stigma of not allowing women to be away from house for a long-period plays a vital role in low enrollment of female pupil in the course (Thiruvassagam & Rengamani, 2015).

4.3.1.3 Educational Qualification

A categorical question was asked to the respondent to know the course they had pursued before being enrolled in the maritime course. Under-Graduate, Graduate and Post-Graduate options were put in for the respondent to select the response.

Table 4- 51 Educational Qualification

Course	Frequency	Percent
Under-Graduate	08	06
Graduate	119	94
Total	127	100

(Source: Excel Output)

8 and 119 respondents had respectively finished their under-graduate and graduate course. Six percent students had studied till preliminary school level may be up to 12th Standard and then had taken-up the admission in maritime course. Thus, maritime course is a gate-pass for those students who do not have interest in conventional degree or diploma course but were attracted by the fancy of technical skills imparted under the maritime course curriculum. 94% pupils completed the basic graduation degree and then enrolled in the maritime course. In the qualitative telephonic discussion it was known that such students were either not aware about the course and hence they pursued conventional graduation or they wished to hold the conventional degree, so that if the job opportunity dried up in the maritime sector then they could leverage the conventional degree to seek job in other than maritime sector. The primary reasons to enroll in the maritime course were to attain a niche skill, switch over or accept new career opportunities which provided handsome initial salary with a faster rise in pay-package and higher career progression (Ku, Ye, Lee, *et al.*, 2017).

4.3.1.4 Age, Gender And Educational Qualification

A cross-tabulation of age and educational qualification was layered with the gender in order to know how the male and female respondents of different age-groups pursued their preliminary education.

Table 4- 52 Cross-Tabulation Of Age, Gender And Educational Qualification

Age	Gender	Under-Graduate	Graduate	Total
18-25	Male	07	83	90
	Female	01	28	29
	Total	09	110	119
26-35	Male	00	08	08
	Female	00	00	00
	Total	00	00	08
Total	Male	08	90	98
	Female	01	28	29
	Total	09	118	127

(Source: Excel Output)

It may be inferred that in the age-group of 18-25 years, majority (119) of respondents completed either their school level education or their graduation or post-graduation. 110 respondents had completed their basic graduation level studies. As per the Indian Education System, a graduation degree is a basic necessity and is often considered as a minimum eligibility for the job aspirant.

Male respondent are more in numbers who have completed the graduation degree than the female respondent. None of the male or female failed to complete the preliminary school level or conventional college level education in the age bracket of 26-35 years. In the age-group of 26-35 years, seven male candidates accomplished the graduation degree. In fact they took a longer time to accomplish the same. It may be inferred that inception of learning, does not depend on age. The self-drive and self-motivation only promotes learning, irrespective of age (Shashikant, 2019).

4.3.2 Course Details

It consists of analysis on Type of Course, Semester Pursued, Nature of Course, Stream of School Education and Stream of College Education.

4.3.2.1 Type Of Course

Nominal scale-based question was asked to seek the response on the type of course pursued by the respondent. The maritime course offers different variants of accomplishments of course such as Degree, Post-Graduate Degree, Post-Graduate Diploma.

Table 4- 53 Type Of Course

Course Type	Frequency	Percent
Graduate Degree	19	15
Post-Graduate Degree	02	02
Post-Graduate Diploma	106	83
Total	127	100

(Source: Excel Output)

19 respondents had enrolled for a Graduate Degree course. Two respondents had enrolled for Post-Graduation Degree course and 106 respondents had enrolled for a Post-Graduate Diploma course. 15% pursued the course to attain the basic graduation degree. Two percent enrolled in the course for attaining post-graduation degree and 83% enrolled to gain Post-Graduate Diploma.

Table 4- 54 Cross-Tabulation Of Eligible Qualification And Course Pursued

Eligible Qualification	Course Pursued			Total
	Graduate Degree	Post-Graduate Degree	Post-Graduate Diploma	
Under Graduate	09	00	00	09
Graduate	10	02	106	118
Total	19	02	106	127

(Source: Excel Output)

It may be inferred that nine students who had school level education enrolled in a graduate degree course. 12th Science is the minimum school level education required to pursue course like Bachelor's in Technology, Bachelor's in Nautical Science. School level education in any stream opened the gate for Graduation Degree in the course like General Purpose Rating, Bachelor's in Maritime Studies. Graduation especially Bachelor in Technology is a must to pursue courses like Graduate Marine Engineering. Graduation in any field provided an opportunity to enter into Post-Graduate Diploma in Maritime Management, Master's in Maritime Management or Post-Graduate Diploma in Maritime Law. Bachelor's in Law is a must to enter into Master's in Law course specific to the Maritime Sector. In the survey it was noted that students who studied till school-level or graduation level enrolled for the Graduation (Bachelor's) level course. Students who pursued Graduation Degree enrolled for either Post-Graduation Degree Course or Post-Graduation Diploma Course. It may be inferred that post-Graduate diploma is a highly favoured option.

4.3.2.2 Semester Pursuing

An open-ended question was probed to know that in which semester the students were pursuing the maritime course.

Table 4- 55 Semester Pursuing

Semester	Frequency	Percent
2 nd	12	09
4 th	106	84
8 th	9	07
Total	127	100

(Source: Excel Output)

It may be inferred that 12 students (nine percent) were in second semester; 106 students (84%) were pursuing fourth semester and nine students (seven percent) in eighth semester. Thus, the survey has tried to approach the different students of last semester for understanding their perspective to pursue the course. A course of two years would have four semesters; a course of three years would have six semesters and a course of four years would have eight semesters.

4.3.2.3 Nature Of Course

A dichotomous question was asked to know if the respondents pursued a full-time or part-time course. 100% respondents pursued full-time course. Thus, it may be inferred that the survey was conducted with the students who pursued a full-time course only.

4.3.2.4 Stream Of School Education

A nominal single choice question was asked to know the stream of school education that respondents had pursued before they enrolled in the maritime course. Generic stream such as Science, Commerce, Arts, or others were asked.

Table 4- 56 Stream Of School Education

Stream	Frequency	Percent
Science	48	38
Commerce	79	62
Total	127	100

(Source: Excel Output)

48 students and 79 students pursued Science and Commerce course respectively at school level. 38% students who pursued science stream were enrolled for maritime course, to excel in the niche skills for better economic prospects and job placements. In fact 12th Science is compulsory, if one wishes to pursue Bachelor's in Technology (Marine Engineering) and Bachelor's in Science (Nautical Science). 62% students who pursued commerce stream were enrolled for maritime course. Thus, it may be inferred that more number of commerce stream students diversified to the maritime course for better future prospects. In the qualitative telephonic discussion, it was understood that commerce students pursued the diversified course because they believed that such diversification added a value in their curriculum-vita, which assisted them to secure a good job with a high package in a niche domain, where the level of competition was perceived to be low.

4.3.2.5 Stream Of College Education

A nominal single choice question was asked to know the stream of college education that respondents had pursued before they enrolled in the maritime course. Generic stream such as Science, Commerce, and Arts were asked.

Table 4- 57 Stream Of College Education

Stream	Frequency	Percent
Science	44	35
Commerce	83	65
Total	127	100

(Source: Excel Output)

44 students completed their college level education in Science Stream. 83 students completed the college from commerce stream. On comparing the data with school level education, a

transition was noticed from science to commerce stream, when student moved from school level to the college level. In the Indian education system, Science is considered to the top most streams, followed by Commerce and then Arts the lower most. A transition is allowed from top most stream to lower most, but the vice-versa is prohibited. Students, often change the stream in the college level may be either for better job prospects or they might find it difficult to sustain the learning process in the mother stream. Thus, college level studies and specialization opens different job opportunity for the students (Martin, 2009).

4.3.3 Institute And Course

It consists of analysis on Institute Details, Course Enrollment and Specialization Selection

4.3.3.1 Institute Details

A nominal single choice question was asked to the respondents to know the name of the institute in which they were pursuing the maritime course. B.K. School of Business Management, Ganpat University and Gujarat Maritime University were the options suggested from which the respondent had to choose the one applicable to them.

Table 4- 58 Institute Details

Institute	Frequency	Percent
B.K. School of Business Management	105	83
Ganpat University (U. V. Patel College of Engineering)	19	15
Gujarat Maritime University	03	02
Total	127	100

(Source: SPSS Output)

105 students (83%); 19 students (15%) and three students (two percent) pursued the maritime course from B.K. School of Business Management, Ahmedabad; Ganpat University (U. V. Patel College of Engineering), Mehasana and Gujarat Maritime University, Gandhinagar respectively. B.K. is the first-mover institute to start the maritime course, which was then followed by Ganpat University and Gujarat Maritime University. Metro city Ahmedabad being the education hub, enrollment of students in the maritime course was more. In the qualitative discussion it was known that student preferred to enroll in B.K. School due to its brand-name and good placement opportunity. After the clearance of the preliminary entrance grades, students often selected the institute of their choice based on the specialization and courses offered by the institute. Gujarat Maritime University has recently started the course and hence the enrollment of students was less.

4.3.3.2 Course Enrollment

A multiple-choice question was asked to the respondent to know the name of the course they were currently pursuing.

Table 4- 59 Course Enrollment

Course	Frequency	Percent
Bachelors in Technology (B. Tech)	09	07
Graduate Marine Engineering (GME)	10	08
Post-Graduate Diploma in Maritime Management (PGDM)	105	83
Master in Law (LLM)	01	01
Post-Graduate Diploma in Maritime Law (PGDM-Law)	02	01
Total	127	100

(Source: Excel Output)

The analysis of positive response was tabulated and later the percentage was computed for the same. It may be observed that 83% had enrolled in PGDM; eight percent had enrolled in GME; seven percent had enrolled in B.Tech and one percent each had enrolled in LLM and PGDM-Law. B.Tech course and GME is being offered by Ganpat University; PGDM is being offered by B.K. School and LLM and PGDM-Law is being offered by Gujarat Maritime University. In the year-2020, a new course has been floated by Gujarat Maritime University in Masters of Business Administration (MBA) in Maritime Management.

4.3.3.3 Specialization Selection

A multiple-choice nominal question was asked to know the specialization enrolled in by the students. Broadly, specialization offered in the maritime course was Port Management, Logistics and Shipping Management, Marine Engineering, Nautical Science and Maritime Law.

Table 4- 60 Specialization Selection

Specialization	Frequency	Percent
Port Management	06	05
Logistics and Shipping Management	99	78
Marine Engineering	19	15
Maritime Law	03	02
Total	127	100

(Source: Excel Output)

78% pursued Logistics and Shipping Management specialization; 15% specialized in Marine Engineering. Five percent pursued Port Management and only two percent pursued Maritime

Law. It may be inferred that Logistics and Shipping Management spun lot of on-shore and off-shore jobs and hence it was favoured by the students to gain specialized knowledge when they pursued the maritime course. In the qualitative telephonic discussion, it was learnt that students perceived the Port Management course to offer job opportunities which were on-shore. Even though on-shore or sea-based jobs offered incentives and higher pay packages, students were skeptical to leave the cozy environment and family for such jobs. They considered long-distance ship traveling to be risky and isolation from family and friends.

4.3.4 Duration And Fees

It consists of analysis on Course Duration and Course Fees.

4.3.4.1 Course Duration

A single choice nominal question was asked to know the duration of the course, which was categorized as less than one year, one year, two years and more than two years.

Table 4- 61 Course Duration

Duration	Frequency	Percent
1 Year	13	10
4 Years	09	07
2 Years	105	83
Total	127	100

(Source: Excel Output)

83% were enrolled in a two years course; ten percent were enrolled in one year course; seven percent were enrolled in a four years course. It may be inferred that students preferred to study in a two years full-time course.

4.3.4.2 Course Fees

An open-ended question was probed to the respondents to know the yearly fees paid by them for the course they were pursuing in the respective institute.

Table 4- 62 Course Fees

Institute Name	Course Name	Duration of the Course	Fees Amount	Frequency
B.K. School of Business Management	Post-Graduate Diploma in Maritime Management (PGDM)	2 Years	Rs.40,000	105

Institute Name	Course Name	Duration of the Course	Fees Amount	Frequency
Ganpat University (U. V. Patel College of Engineering)	Bachelors in Technology (B. Tech)	4 Years	Rs.3,40,000	09
Ganpat University (U. V. Patel College of Engineering)	Graduate Marine Engineering (GME)	1 Year	Rs.5,80,000	10
Gujarat Maritime University	Post-Graduate Diploma in Maritime Law (PGDM-Law)	1 Year	Rs.4,00,000	02
Gujarat Maritime University	Master in Law (LLM)	1 Year	Rs.1,47,000	01

(Source: Excel Output)

It may be inferred that the fees charged by B.K. School is the lowest, because it is a government department. Ganpat University and Gujarat Maritime University are private university without any government support, so the fees charged by them are more than the government college. The fees are higher for those courses which are either lengthier or the type of course is technical in nature.

4.3.5 Course Awareness

It consists of analysis on Mode of Awareness and Marine Background.

4.3.5.1 Mode Of Awareness

A multiple-choice question was asked to know that how the respondent came to know about the course.

Table 4- 63 Mode Of Awareness

Medium of Awareness	Frequency	Percentage
Campus Visit	11	09
College Website	26	20
Academic Person	14	11
Via Friends	43	34
Via Relatives	10	08
Others (Alumni)	23	18
Total	127	100

(Source: Excel Output)

It may be inferred that 34% gained awareness through friends; 20% referred college website to gather information about the course; 18% took the opinion of alumni before entering the course; 11% took advice from the person who was associated with academics; nine percent made campus visit and then decided to enroll in the course and eight percent gathered information about the course through relatives. A friend encouraging his or her buddy to enroll in the course may be treated as a herding behavior of the prospective pupil. Thus, informal network plays a powerful role in attracting students to the maritime course.

4.3.5.2 Marine Background

A nominal question was poised to know if the respondent had any marine background which motivated them to pursue the course.

Table 4- 64 Marine Background

Marine Background	Frequency	Percentage
Parents	10	08
Relatives	17	14
Siblings	02	02
Not-Applicable	98	76
Total	127	100

(Source: Excel Output)

76% students had no marine background. 14% students had their relatives working in the marine sector. Eight percent and two percent students had either parents or siblings, respectively in the marine sector. At times the prior exposure in the marine background often facilitates in taking decision for enrollment in the course. The knowledge of marine background helps to easily explore and evaluate the opportunities beforehand. Thus, someone's experience in the marine field provides leverage to take the crucial decision to enroll in the course.

4.3.6 Job Nitty-Gritty

It consists of analysis on Job Location and Job Preference.

4.3.6.1 Job Location

A multiple-choice question was asked to know that the where did the respondent preferred to work.

Table 4- 65 Job Location

Preferred Location	Frequency	Percentage
Within State	42	33

Preferred Location	Frequency	Percentage
Within Country	49	39
Abroad	36	28
Total	127	100

(Source: Excel Output)

Maritime sector opens-up job opportunity within country and also abroad. 39% students preferred to opt for job location within the country. 33% preferred to work within the state only. Only 28% preferred to go abroad for the job. It may be inferred that students who wished to perform job abroad, were highly ambitious and aspired quick growth, for which they were ready to forgo the comfort of house and family. Students, who wished to work within country, believed in career growth but not at the cost of leaving the motherland. At times personal commitment and family's pressure often acted as a hurdle to leave India for the purpose of job. Students, who preferred to live within the State and perform the job, were in fact a type of homing bird, who may be easily satisfied with his or her career growth. In the qualitative telephonic discussion, it was known that they did not wish to leave their cozy home and had high affinity with the State.

4.3.6.2 Job Preference

A single choice question was raised to know if the respondent preferred to do perform a Non-Sea Based Job or a Sea-Based Job.

Table 4- 66 Job Preference

Job Preference	Frequency	Percentage
Non-Sea Based Job	82	65
Sea-Based Job	45	35
Total	127	100

(Source: Excel Output)

It may be inferred that 65% respondents preferred Non-Sea Based Job and only 35% preferred Sea-Based Job. The reasons for highest preference for Non-Sea Based jobs were it provided comfort; one can stay with the family whole time, was not risky and did not involve any travelling. There are high incentives for sea-based jobs, but were not preferred on a larger scale due to frequent long-distance traveling, involved high level of accidental risk, detachment from family and friends, emotional and social break-down and isolation. Thus, it may be inferred that pupils who were emotional and comfort oriented did not wish to opt for sea-based job.

4.3.7 Opportunities, Challenges And Future Expectations And Growth In Non-Sea Based Jobs

It consists of analysis on Opportunities, Challenges, Future Expectations and Growth in Non-Sea Based Job.

4.3.7.1 Opportunities In Non-Sea Based Jobs

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the opportunity as perceived by the respondent in the Non-Sea Based Jobs. The reliability statistics was performed and the Cronbach Alpha was noted as 0.74 for 15 items. The Cronbach Alpha value was greater than 0.60. The analysis pertains to 82 respondents who had indicated their preference for a Non-Sea Based Job.

Table 4- 67 Opportunities In Non-Sea Based Jobs

Statements	Mean (X)	Std. Deviation (SD)
Specialization in niche area leads to low level of competition.	3.67	0.94
High availability of jobs in market within and outside country.	3.71	0.84
Starting salary package better than other jobs.	3.38	0.88
Opportunity for placement in government sector.	3.55	0.97
100 percent Job placement.	3.61	0.87
Job stability due to niche area of specialization.	3.83	0.73
Job switching is quite easy.	3.43	0.96
Opportunity to work with multinational companies.	4.23	0.74
Expertise in marine sector opens up vivid job opportunities.	4.09	0.79
As marine infrastructure is static at one place there are less transfers and no frequent changes in location.	3.49	0.95
Good scope for business after studying in maritime education.	3.84	0.88
Personal liking to shipping related work.	4.13	0.84
Exposure to international trade.	4.13	0.58
Well defined career advancement and promotion channel.	3.84	0.76
Quick promotions can be availed.	3.40	0.88

(Source: SPSS Output)

The mean values in almost all the statements were nearer to four, which indicated an agreement with the statements. The SD was less than one, which indicated that there was a strong consensus amongst the respondents with respect to the opportunities listed in the empirical inquiry.

4.3.7.2 Challenges In Non-Sea Based Jobs

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the challenges as perceived by the respondent in the Non-Sea Based Jobs. The reliability statistics was performed and the Cronbach Alpha was noted as 0.76 for 13 items. The Cronbach Alpha value was greater than 0.60. The analysis pertains to 82 respondents who had indicated their preference for a Non-Sea Based Job.

Table 4- 68 Challenges in Non-Sea Based Jobs

Statements	Mean (X)	Std. Deviation (SD)
Lack of job opportunities due to changing industry dynamics.	3.32	0.94
Less job placement if the particular segment of the industry faces slow-down.	3.30	0.91
No growth for promotions.	3.23	1.03
Market dependent sector leading to frequent layoffs and job instability.	3.23	0.89
Government regulations and support is not adequate.	3.20	0.92
Frequent changes in international trade norms/currency rates leading to stiff competition.	3.74	0.87
Less opportunity in country compared to foreign nations.	3.26	0.94
Working from far off locations mostly away from urban areas.	3.43	0.80
Salary lower compared to other jobs.	3.06	1.04
Gender Discrimination may be faced.	3.30	1.05
Work Life Balance is difficult due to nature of job.	3.29	0.82
Lack of available courses in country for promotion/specialization.	3.49	0.95
Time consuming and High cost is to be incurred for up gradation of skills.	3.43	0.86

(Source: SPSS Output)

The mean values in almost all the statements were nearer to three, which indicated a neutral agreement with the statements. The statements, in which SD was less than one, indicated that there was a strong consensus amongst the respondents with respect to the challenges listed in the empirical inquiry. An SD greater than one indicated that all respondents did not unanimously agree to an opinion.

4.3.7.3 Future Expectations In Non-Sea Based Jobs

An open-ended question was probed to know the dream company in which the respondents liked to work. The dream companies were Gujarat Maritime Board, Adani Enterprises Ltd, Adani Ports and SEZ Ltd, Container Corporation of India, Reliance Logistics Group, Agarwal Impex, Maersk, Deutsche Post DHL Group, FedEx Logistics, Eusu Logistics LLC, Kuehne Nagel Pvt Ltd, Evergreen Line, Federal Exim and Logistics Private Limited, Exim Warehousing and Logistics Pvt Ltd, Hapag-Lloyd Container Shipping, Hyundai Merchant Marine, Meridian Shipping and Container Carrier Inc, Transworld Group: Shipping and Logistics Services Company, TVS Supply Chain Solutions etc. 62% (51 students) expected a salary of Rs.3-5 lakh, 18% each (30 students) expected a salary of Rs 2-3 lakh and Rs.5-8 lakh respectively, only two percent (one student) expected a Cost-To-The Company (CTC) of Rs.8 lakh and above.

4.3.7.4 Growth In Non-Sea Based Jobs

A dichotomous question was asked if the respondents were aware that for future promotions they need to appear for a specific examination and if they would like to appear for the same.

Table 4- 69 Awareness And Willingness For Non-Sea Based Exam

Awareness on Exams		Willingness to appear	
Yes	No	Yes	No
53 (65%)	29 (35%)	72 (88%)	10 (12%)

(Source: SPSS Output)

Thus, it may be inferred that 65% were aware that clearance of exams were a must for promotions. 35% were not aware for the same. 88% were willing to appear for such exams and 12% did not show any interest in appearing for the exams. The percentage rise in willingness to appear for the exam may be attributed to the students who were not aware were also willing to appear for the exam, as their promotions and future growth were directly linked to it.

4.3.8 Opportunities, Challenges And Future Expectations And Growth In Sea Based Jobs

It consists of analysis on Opportunities, Challenges, Future Expectations and Growth in Non-Sea Based Job.

4.3.8.1 Opportunities In Sea Based Jobs

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the opportunity as perceived by the respondent in the Sea Based Jobs. The reliability statistics was performed and the Cronbach Alpha was noted as 0.68 for 12 items. The Cronbach

Alpha value was greater than 0.60. The analysis pertains to 45 respondents who had indicated their preference for a Sea Based Job.

Table 4- 70 Opportunities In Sea Based Jobs

Statements	Mean	Std. Deviation
Availability of various choices in sea based jobs.	4.00	0.93
Ever increasing demand of maritime crew.	4.02	0.66
Opportunity for early placement.	3.80	1.06
Good starting salary package.	3.93	0.92
No tax on salary income.	3.82	0.98
Opportunity to work with multinational crew.	4.56	0.50
Opportunity to command fleet of personnel.	4.00	0.71
Opportunity to explore sea and encountering sea related adventures.	4.42	0.75
Personal liking for long travelling and sea voyages.	4.60	0.58
Travel to foreign countries as a part of job.	4.40	0.75
Faster promotions compared to other jobs.	4.31	0.87
Well defined promotion and career advancement prospects.	3.80	0.87

(Source: SPSS Output)

It may be inferred that the mean ratings were between four and nearer to five, which indicated response toward agree and strongly agree category. The SD in majority of the statements was less than one, which meant there was a consensus in the response. A SD of more than one indicated that respondents were not unanimous in their response.

4.3.8.2 Challenges In Sea Based Jobs

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the challenges as perceived by the respondent in the Sea Based Jobs. The reliability statistics was performed and the Cronbach Alpha was noted as 0.89 for 28 items. The Cronbach Alpha value was greater than 0.60. The analysis pertains to 45 respondents who had indicated their preference for a Sea Based Job.

Table 4- 71 Challenges In Sea Based Jobs

Statements	Mean	Std. Deviation
Separation from family for long duration due to long voyages in sea.	4.22	0.93
Unsettled lifestyle due to unavailability at one place and away from home for long durations.	3.78	1.15

Statements	Mean	Std. Deviation
Lack of social life as mostly away from home.	3.51	0.89
Feel isolated as away from family (friends).	4.00	1.08
Often feels like Depression.	3.78	0.93
Difficulty in understanding multi-language and ethnicity.	3.84	0.71
Discrimination on basis of rank.	3.84	0.90
Discrimination on basis of sex.	3.98	0.97
Discrimination on basis of nation/ethnicity.	4.04	0.88
Discrimination on basis of language.	3.84	0.90
Bullying by colleagues and seniors.	4.20	1.04
Rise in maritime piracy leading to threat for crew including death.	3.80	1.25
Stringent Maritime Laws making crew accountable for unavoidable circumstances.	3.84	0.88
Environment compliance related criminalization of crew members like oil spillage, destruction of sea life, etc.	4.33	0.85
Reduced shore leaves leading to less time for relax and rejuvenate.	3.80	0.82
Difficult to prove the competency.	4.09	0.79
Fear of high accident rates.	3.87	0.82
Fatigue due to long working hours at ship.	3.96	0.85
Extended working hours due to unavoidable situations like change in sea weather, cyclones, colleague sick, etc.	4.02	0.84
Different climatic condition making body frequently not adaptable to various climate challenges.	4.02	0.94
Continuous noise and vibration due to vessel leading to specific body related stress.	4.18	0.94
Limited moving space as restricted to vessel leading to physical discomfort for long durations.	3.89	1.19
Exercise cannot be carried out due limitation of available equipment, space and time causing health deterioration.	3.69	0.97
Shift wise working results in disturbance in sleep cycle.	4.31	0.82
Sleeping and eating disorders.	3.78	0.82
Fear of Communicable Diseases.	4.13	0.84
Often deprived of sleep.	3.96	0.77
Causes Sea Sickness in the body.	3.93	0.94

(Source: SPSS Output)

It may be inferred that the mean ratings were between nearer to four, which indicated response toward agree category. The SD in majority of the statements was less than one, which meant

there was a consensus in the response. A SD of more than one indicated that respondents were not unanimous in their response.

4.3.8.3 Future Expectations In Sea Based Jobs

An open-ended question was probed to know the dream company in which the respondents liked to work. The dream companies were Gujarat Maritime Board, Adani Enterprises Ltd, Adani Ports and SEZ Ltd, Container Corporation of India, Reliance Logistics Group, Agarwal Impex, Maersk, Deutsche Post DHL Group, FedEx Logistics, Eusu Logistics LLC, Kuehne Nagel Pvt Ltd, Evergreen Line, Federal Exim and Logistics Private Limited, Exim Warehousing and Logistics Pvt Ltd, Hapag-Lloyd Container Shipping, Hyundai Merchant Marine, Meridian Shipping and Container Carrier Inc, Transworld Group: Shipping and Logistics Services Company, TVS Supply Chain Solutions etc. 38% (17 students) expected a salary of Rs.3-5 lakh, 26% (12 students) expected a salary of Rs.8 lakh and above, 20% (nine students) expected a salary of Rs. Rs.5-8 lakh and 16% (seven students) expected a CTC of Rs.2-3 lakh.

4.3.8.4 Growth In Sea Based Jobs

A dichotomous question was asked if the respondents were aware that for future promotions they need to appear for a specific examination and if they would like to appear for the same.

Table 4- 72 Awareness And Willingness For Sea-Based Exam

Awareness on Exams		Willingness to appear	
Yes	No	Yes	No
39 (87%)	6 (13%)	41 (91%)	4 (9%)

(Source: SPSS Output)

Thus, it may be inferred that 87% were aware that clearance of exams were a must for promotions. 13% were not aware for the same. 91% were willing to appear for such exams and nine percent did not show any interest in appearing for the exams. The percentage rise in willingness to appear for the exam may be attributed to the students who were not aware were also willing to appear for the exam, as their promotions and future growth were directly linked to it.

4.3.9 Inferential Statistical Analysis

Hypothesis testing was done on the data. The results of the same are discussed below.

4.3.9.1 Test Of Normality Perceived For Opportunities In Non-Sea Based Jobs

H_{020} : Data is normal.

H_{120} : Data is not normal.

Table 4- 73 Test Statistics For Normality Test For Opportunities In Non-Sea Based Jobs

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Specialization in niche area leads to low level of competition.	0.27	82	0.00	0.86	82	0.00
High availability of jobs in market within and outside country.	0.22	82	0.00	0.87	82	0.00
Starting salary package better than other jobs.	0.26	82	0.00	0.87	82	0.00
Opportunity for placement in government sector.	0.26	82	0.00	0.88	82	0.00
100 percent Job placement.	0.22	82	0.00	0.88	82	0.00
Job stability due to niche area of specialization.	0.30	82	0.00	0.84	82	0.00
Job switching is quite easy.	0.26	82	0.00	0.87	82	0.00
Opportunity to work with multinational companies.	0.26	82	0.00	0.79	82	0.00
Expertise in marine sector opens up vivid job opportunities.	0.29	82	0.00	0.81	82	0.00
As marine infrastructure is static at one place there are less transfers and no frequent changes in location.	0.24	82	0.00	0.87	82	0.00
Good scope for business after studying in maritime education.	0.22	82	0.00	0.86	82	0.00
Personal liking to shipping related work.	0.24	82	0.00	0.82	82	0.00
Exposure to international trade.	0.35	82	0.00	0.75	82	0.00
Well defined career advancement and promotion channel.	0.30	82	0.00	0.84	82	0.00
Quick promotions can be availed.	0.23	82	0.00	0.88	82	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.3.9.2 Test Of Normality Perceived For Challenges In Non-Sea Based Jobs

H_{021} : Data is normal.

H_{121} : Data is not normal.

Table 4- 74 Test Statistics For Normality Test For Challenges In Non-Sea Based Jobs

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Lack of job opportunities due to changing industry dynamics.	0.21	82	0.00	0.90	82	0.00
Less job placement if the particular segment of the industry faces slow-down.	0.22	82	0.00	0.88	82	0.00
No growth for promotions.	0.20	82	0.00	0.89	82	0.00
Market dependent sector leading to frequent layoffs and job instability.	0.24	82	0.00	0.89	82	0.00
Government regulations and support is not adequate.	0.21	82	0.00	0.89	82	0.00
Frequent changes in international trade norms/currency rates leading to stiff competition.	0.31	82	0.00	0.85	82	0.00
Less opportunity in country compared to foreign nations.	0.20	82	0.00	0.89	82	0.00
Working from far off locations mostly away from urban areas.	0.26	82	0.00	0.85	82	0.00
Salary lower compared to other jobs.	0.23	82	0.00	0.90	82	0.00
Gender Discrimination may be faced.	0.23	82	0.00	0.90	82	0.00
Work Life Balance is difficult due to nature of job.	0.26	82	0.00	0.84	82	0.00
Lack of available courses in country for promotion/specialization.	0.27	82	0.00	0.86	82	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words, it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e., small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e., large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.3.9.3 Test Of Normality Perceived For Opportunities In Sea Based Jobs

H_{022} : Data is normal.

H_{122} : Data is not normal.

Table 4- 75 Test Statistics For Normality Test For Opportunities In Sea Based Jobs

Statements	Shapiro-Wilk		
	Statistic	df	Sig.
Availability of various choices in sea-based jobs.	0.83	45	0.00
Ever increasing demand of maritime crew.	0.79	45	0.00
Opportunity for early placement.	0.87	45	0.00
Good starting salary package.	0.79	45	0.00
No tax on salary income.	0.86	45	0.00
Opportunity to work with multinational crew.	0.63	45	0.00
Opportunity to command fleet of personnel.	0.81	45	0.00
Opportunity to explore sea and encountering sea related adventures.	0.74	45	0.00
Personal liking for long travelling and sea voyages.	0.67	45	0.00
Travel to foreign countries as a part of job.	0.73	45	0.00
Faster promotions compared to other jobs.	0.75	45	0.00
Well defined promotion and career advancement prospects.	0.84	45	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample). Referring at the test-statistic the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.3.9.4 Test Of Normality Perceived For Challenges In Sea Based Jobs

H_{023} : Data is normal.

H_{123} Data is not normal.

Table 4- 76 Test Statistics For Normality Test For Challenges In Sea Based Jobs

Statements	Shapiro-Wilk		
	Statistic	df	Sig.
Separation from family for long duration due to long voyages in sea.	0.78	45	0.00
Unsettled lifestyle due to unavailability at one place and away from home for long durations.	0.85	45	0.00
Lack of social life as mostly away from home.	0.84	45	0.00
Feel isolated as away from family (friends).	0.80	45	0.00

Statements	Shapiro-Wilk		
	Statistic	df	Sig.
Often feels like Depression.	0.87	45	0.00
Difficulty in understanding multi-language and ethnicity.	0.83	45	0.00
Discrimination on basis of rank.	0.87	45	0.00
Discrimination on basis of sex.	0.84	45	0.00
Discrimination on basis of nation/ethnicity.	0.81	45	0.00
Discrimination on basis of language.	0.84	45	0.00
Bullying by colleagues and seniors.	0.73	45	0.00
Rise in maritime piracy leading to threat for crew including death.	0.84	45	0.00
Stringent Maritime Laws making crew accountable for unavoidable circumstances.	0.82	45	0.00
Environment compliance related criminalization of crew members like oil spillage, destruction of sea life, etc.	0.75	45	0.00
Reduced shore leaves leading to less time for relax and rejuvenate.	0.84	45	0.00
Difficult to prove the competency.	0.80	45	0.00
Fear of high accident rates.	0.84	45	0.00
Fatigue due to long working hours at ship.	0.78	45	0.00
Extended working hours due to unavoidable situations like change in sea weather, cyclones, colleague sick, etc.	0.79	45	0.00
Different climatic condition making body frequently not adaptable to various climate challenges.	0.83	45	0.00
Continuous noise and vibration due to vessel leading to specific body related stress.	0.80	45	0.00
Limited moving space as restricted to vessel leading to physical discomfort for long durations.	0.80	45	0.00
Exercise cannot be carried out due limitation of available equipment, space and time causing health deterioration.	0.83	45	0.00
Shift wise working results in disturbance in sleep cycle.	0.77	45	0.00
Sleeping and eating disorders.	0.86	45	0.00
Fear of Communicable Diseases.	0.78	45	0.00
Often deprived of sleep.	0.84	45	0.00
Causes Sea Sickness in the body.	0.83	45	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample). Referring at the test-statistic the p-value is noted to be less

than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.3.9.5 Fisher's Exact Test Between Gender And Job Preference

A Fisher's Exact Test was performed on a 2x2 matrix data of gender and preference for job. The test was administered on data collected from 127 respondents.

H₀₂₄: There is no association between gender and preference for job.

H₁₂₄: There is an association between gender and preference for job.

Table 4- 77 Test Statistics For Fisher's Exact Test

Gender	Non-Sea Based Job	Sea Based Job	Total
Male	56	42	98
Female	26	3	29
Total	82	45	127
Fisher's Exact Test Value	10.34		
P- Value(2-Sided)	0.01		

(Source: SPSS Output)

It may be inferred that the p-value is $0.01 < 0.05$, therefore the null hypothesis is rejected. It may be understood that there is an association between gender and preference for job. From the cross-tabulated data it may be explained that very few females preferred sea-based jobs. The sea-based jobs requires good physical stamina, involves long-distance travelling, isolation from family etc, which may not be possible for a women to undertake. There is a stereotype that women are not capable of pursuing blue-collared, hard toil jobs, they were meant for only soft-skills oriented job. At times the social stigma and family pressure often obstructs women to take-up such jobs, despite her desire for the same (Carpenter, 2018).

4.3.9.6 Fisher's Exact Test Between Preference For Job And Expected Pay Package

A Fisher's Exact Test was performed on a 2x2 matrix data of awareness for future promotions and appearing for exams. The test was administered on data collected from 127 respondents.

H₀₂₅: There is no association between preference for job and expected pay package.

H₁₂₅: There is an association between preference for job and expected pay package.

Table 4- 78 Test Statistics For Fisher's Exact Test

Gender	Non-Sea Based	Sea-Based	Total
Upto Rs.8 Lakh	81	33	114
Above Rs.8 Lakh	01	12	13
Total	82	45	127

Gender	Non-Sea Based	Sea-Based	Total
Fisher's Exact Test Value	20.48		
P- Value(2-Sided)	0.00		

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. It may be understood that there is an association between preference for job and expected pay package. Working in sea-based jobs involves facing natural hardships, physical unrest, adaption to unfriendly working conditions etc so they expect higher salary when compared to the non-sea-based jobs (Costanzi, 2019).

4.3.9.7 Two- Way Chi-Square Test Between Gender And Location of Job (Test of Independence)

A Chi-Square Test was performed on a 3x2 matrix data of gender and location of job. The test was administered on data collected from 127 respondents.

H₀₂₆: There is no association between gender and location of job.

H₁₂₆: There is an association between gender and location of job.

Table 4- 79 Test Statistics For Pearson's Chi-Square Test

Gender	Abroad	Within Country	Within State	Total
Male	27	38	33	98
Female	09	11	09	29
Total	36	49	42	127
Pearson Chi-Square Value				0.15
P- Value(2-Sided)				0.93

(Source: SPSS Output)

It may be inferred that the p-value is $0.93 > 0.05$, therefore the null hypothesis is not rejected. It may be understood that there is no association between gender and preference for location of job. From the cross-tabulated data it may be inferred that both male and female have no mobility issues when it comes to accepting job offers abroad or within the country or within the state. It is positive to note that such mobility would help the aspirant to accept lucrative offers and good career growth.

4.3.9.8 Fisher's Exact Test Between Awareness For Future Promotions And Appearing For Exams In Non-Sea Based Jobs

A Fisher's Exact Test was performed on a 2x2 matrix data of awareness for future promotions and appearing for exams. The test was administered on data collected from 82 respondents.

H₀₂₇: There is no association between awareness for future promotions and appearing for exams in sea based jobs.

H₁₂₇: There is an association between awareness for future promotions and appearing for exams in sea based jobs.

Table 4- 80 Test Statistics For Fisher’s Exact Test

Awareness	Appearing for the Exam		Total
	Yes	No	
Yes	38	01	39
No	03	03	06
Total	41	4	45
Fisher’s Exact Test Value			14.45
P- Value(2-Sided)			0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. It may be understood that there is an association between awareness for future promotions and appearing for exams. Those students who were aware that specific maritime exams, were a necessity for future promotions, wished to appear for the same. Those who were not aware did not wish to appear for the additional exams. There were some exceptional cases that were not aware but still wished to appear for the exam, just because it opened the gate for promotions in the maritime sector. Some of the students were aware but did not wish to appear for the exams, may be they were not keen to pursue the career in maritime sector for a long-time and wished to diversified.

4.3.9.9 Fisher’s Exact Test Between Awareness For Future Promotions And Appearing For Exams In Sea Based Jobs

A Fisher’s Exact Test was performed on a 2x2 matrix data of awareness for future promotions and appearing for exams. The test was administered on data collected from 45 respondents.

H₀₂₈: There is no association between awareness for future promotions and appearing for exams in non-sea based jobs.

H₁₂₈: There is an association between awareness for future promotions and appearing for exams in non-sea based jobs.

Table 4- 81 Test Statistics For Fisher's Exact Test

Awareness	Appearing for the Exam		Total
	Yes	No	
Yes	53	00	53
No	19	10	29
Total	72	10	82
Fisher's Exact Test Value			20.81
P- Value(2-Sided)			0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. It may be understood that there is an association between awareness for future promotions and appearing for exams. Those students who were aware that specific maritime exams, were a necessity for future promotions, wished to appear for the same. Those who were not aware did not wish to appear for the additional exams. There were some exceptional cases that were not aware but still wished to appear for the exam, just because it opened the gate for promotions in the maritime sector.

4.3.9.10 One-Way Chi-Square Test (Test Of Goodness Of Fit)

One Way Chi-Square Test was administered to check the awareness of students about the course.

H₀₂₉: There is no significant difference in the proportion of various sources of information.

H₁₂₉: There is a significant difference in the proportion of various sources of information.

Table 4- 82 Chi-Square Test Statistics

Source of Information	Observed	Expected
Campus Visit	11	21.17
College Website	26	21.17
Academic Person	14	21.17
Via Friends	43	21.17
Via Relatives	10	21.17
Others (Alumni)	23	21.17
Total	127	127
P-Value	0.00	

(Source: Excel Output)

It may be inferred that p-value is $0.00 < 0.05$, which means the H₀₂ is rejected. There is a significant difference between the observed and the expected value. The most favourable way

for creating awareness in the prospective pupil was through the means of reference from friends. Thus, a chain of contacts between friends created awareness about the course.

4.3.9.11 Factor Analysis On Opportunities In Non-Sea Based Jobs

A factor analysis was applied for data reduction and clubbing of statements into factors. The hypothesis for factor analysis was framed as

H_{030} : Variables are uncorrelated.

H_{130} : Variables are correlated.

Table 4- 83 KMO And Bartlett's Test For Opportunities In Non-Sea Based Jobs

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.68
Bartlett's Test of Sphericity	Approx. Chi-Square	240.10
df		105
Sig.		0.00

(Source: SPSS Output)

The KMO value was noted as 0.68 which is more than 0.60, which indicated that factor analysis was possible. The Sig. p-value was $0.00 < 0.05$, which means H_{01} is rejected. i.e. Variables are correlated.

Table 4- 84 Factor Analysis On Opportunities In Non-Sea Based Jobs

Statements	Factor Name	Factor Loadings
Specialization in niche area leads to low level of competition.	Specialized Prospects	0.69
High availability of jobs in market within and outside country.		0.76
Starting salary package better than other jobs.	Hefty Package and Stable Placements	0.58
Opportunity for placement in government sector.		0.60
100 percent Job placement.		0.71
Job stability due to niche area of specialization.		0.63
Job switching is quite easy.	Quick Career Growth	0.53
Well defined career advancement and promotion channel.		0.73
Quick promotions can be availed.		0.72
Opportunity to work with multinational companies.	Choice Based International Job	0.72
Personal liking to shipping related work.		0.69
Exposure to international trade.		0.79
Expertise in marine sector opens up vivid job opportunities.	Diversification and Entrepreneurship	0.52

Statements	Factor Name	Factor Loadings
Good scope for business after studying in maritime education.		0.55
As marine infrastructure is static at one place there are less transfers and no frequent changes in location.	Stable Location	0.83

(Source: SPSS Output)

Thus, it may be inferred that students perceived specialized prospects with hefty packages and stable placements. Non-Sea based jobs offered quick career growth in choice-based international job. Non-Sea based assisted in Job diversification and promoted entrepreneurship in the same domain. The heavy-weight single factor emphasized stable location as one of the important feature of the non-sea based job.

4.3.9.12 Mann-Whitney U Test On Opportunities In Non-Sea Based Jobs

A Mann-Whitney U was applied to check the significant difference on perception of opportunity in non-sea based jobs between the genders. The hypothesis was framed as

H₀₃₁: Male and female do not significantly differ in the perception of opportunity in non-sea based jobs.

H₁₃₁: Male and female significantly differ in the perception of opportunity in non-sea based jobs.

Table 4- 85 Results Of Mann-Whitney U Test

Perceived Opportunities	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Specialized Prospects	Male	57	42.30	2411.00	667.00	-0.49	0.62
	Female	25	39.68	992.00			
Hefty Package and Stable Placements	Male	57	43.17	2460.50	617.50	-1.07	0.28
	Female	25	37.70	942.50			
Quick Career Growth	Male	57	42.66	2431.50	646.50	-0.74	0.46
	Female	25	38.86	971.50			
Choice Based International Job	Male	57	42.48	2421.50	656.50	-0.63	0.53
	Female	25	39.26	981.50			
	Male	57	42.04	2396.50	681.50	-0.35	0.73

Perceived Opportunities	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Diversification and Entrepreneurship	Female	25	40.26	1006.50			
Stable Location	Male	57	41.32	2355.00	702.00	-0.11	0.91
	Female	25	41.92	1048.00			

(Source: SPSS Output)

The Sig. P-value for Mann-Whitney U Test in all cases is more than 0.05, which indicates that the null hypothesis is not rejected. In other words it may be inferred that male and female do not significantly differ in the perception of opportunity in non-sea based jobs. It clearly indicates that male and female were equally aware about the prospects that could be attained on pursuing the maritime course. It may be inferred that before entering the course the institute had explained them in prim and proper manner on the benefits that may accrue to them, if they pursued the niche maritime course. The aspirants might have gathered information on the prospects of course from their informal sources, which made them more knowledgeable on the opportunities pursued from the course.

4.3.9.13 Factor Analysis On Challenges In Non-Sea Based Jobs

A factor analysis was applied for data reduction and clubbing of statements into factors. The hypothesis for factor analysis was framed as

H_{032} : Variables are uncorrelated.

H_{132} : Variables are correlated.

Table 4- 86 KMO And Bartlett's Test For Challenges In Non-Sea Based Jobs

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.71
Bartlett's Test of Sphericity	Approx. Chi-Square	237.44
df		78
Sig.		0.00

(Source: SPSS Output)

The KMO value was noted as 0.71 which is more than 0.60, which indicated that factor analysis was possible. The Sig. p-value was $0.00 < 0.05$, which means H_{02} is rejected. i.e. Variables are correlated.

Table 4- 87 Factor Analysis On Challenges In Non-Sea Based Jobs

Statements	Factor Loadings	Factor Loadings
Lack of job opportunities due to changing industry dynamics.	Unstable Marine and External Environment	0.59
No growth for promotions.		0.73
Market dependent sector leading to frequent layoffs and job instability.		0.72
Government regulations and support is not adequate.		0.55
Frequent changes in international trade norms/currency rates leading to stiff competition.	High Competition and No Courses	0.75
Lack of available courses in country for promotion/specialization.		0.73
Working from far off locations mostly away from urban areas.	On Job Issues	0.63
Gender Discrimination may be faced.		0.68
Work Life Balance is difficult due to nature of job.		0.60
Time consuming and High cost is to be incurred for up gradation of skills.		0.67
Less job placement if the particular segment of the industry faces slow-down.	Job Retardation	0.83

(Source: SPSS Output)

Thus, it may be inferred that students perceived marine sector and external environment to be unstable. They believed that there was a high competition and no courses for up-gradation. On Job Issues were also primary challenges. Job retardation was also exhibited as a challenge in the non-sea based job. Two low weight statements were not incorporated in the analysis and one heavy weight statement was considered as one factor.

4.3.9.14 Mann-Whitney U Test On Challenges In Non-Sea Based Jobs

A Mann-Whitney U Test was applied to check the significant difference on perception on challenges in non-sea based jobs between the genders. The hypothesis was framed as

H₀₃₃: Male and female do not significantly differ in the perception on challenges in non-sea based jobs.

H₁₃₃: Male and female significantly differ in the perception on challenges in non-sea based jobs.

Table 4- 88 Results Of Mann-Whitney U Test

Perceived Challenges	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Unstable Marine and External Environment	Male	57	42.10	2399.50	678.50	-0.38	0.71
	Female	25	40.14	1003.50			
High Competition and No Courses	Male	57	40.07	2284.00	631.00	-0.89	0.37
	Female	25	44.76	1119.00			
On Job Issues	Male	57	39.83	2270.50	617.50	-1.06	0.29
	Female	25	45.30	1132.50			
Job Retardation	Male	57	37.88	2159.00	506.00	-2.19	0.03
	Female	25	49.76	1244.00			

(Source: SPSS Output)

The Sig. P-value for Mann-Whitney U Test for all factors is more than 0.05, which indicates that the null hypothesis is not rejected. In other words it may be inferred that male and female do not significantly differ in the perception of challenges in non-sea based jobs. Male and female agree that unstable marine and external environment and high competition and no courses and on job issues, were perceived to be the biggest challenges. Male and female significantly differed ($p\text{-value} < 0.05$) on the aspect of job retardation point.

SECTION-III ALUMNI

4.4.1 Demographic Analysis

It consists of analysis on Age, Gender and Educational Qualification.

4.4.1.1 Age

On a nominal scale the respondents were asked to tick mark the appropriate inclusive age group.

The groupings of age were from 18-25 years till 46 years and above.

Table 4- 89 Age Of The Respondents

Age	Frequency	Percent
18-25	31	49
26-35	32	51
Total	63	100

(Source: Excel Output)

It was observed that 31 respondents belonged to the age group between 18-25 years. 32 respondents belonged to the age group between 26-35 years. It may be inferred that as high as

51% belonged to the age-group of 26-35 years. It clearly indicates that majority of the respondents were experienced alumni, who were passionate to pursue their career post-completion of conventional degree courses. The study has tried to incorporate alumni of different age group, to draw meaningful insights from the course they pursued and the opportunity it offered.

4.4.1.2 Gender

A categorical question was raised to the respondent to know the gender. Male, Female or Transgender were the options put to avail the response.

Table 4- 90 Gender Of The Respondents

Gender	Frequency	Percent
Male	52	83
Female	11	17
Total	63	100

(Source: Excel Output)

52 respondents were male and 11 respondents were female. It may be inferred that as high as 83% male were working in the maritime sector. Only 17% female respondents were working in the niche maritime sector. It clearly indicates that very less number of women enrolls for such course. After completion of the course only handful of them initiate their career in maritime sector.

4.4.1.3 Educational Qualification

A categorical question was asked to the respondent to know the course they had pursued before being enrolled in the maritime course. Under-Graduate, Graduate and Post-Graduate options were put in for the respondent to select the response.

Table 4- 91 Educational Qualification

Course	Frequency	Percent
Under-Graduate	37	59
Post-Graduate	26	41
Total	63	100

(Source: Excel Output)

37 and 26 respondent had respectively finished their under-graduate, graduate and post-graduate course. 59% were under-graduate and 41% completed post-graduate. It may be inferred that students were easily absorbed in maritime sector after completing either graduation or post-graduation level studies.

4.4.1.4 Age, Gender And Educational Qualification

A cross-tabulation of age and educational qualification was layered with the gender in order to know how the male and female respondents of different age-groups pursued their preliminary education.

Table 4- 92 Cross-Tabulation Of Age, Gender And Educational Qualification

Age	Gender	Graduate	Post-Graduate	Total
18-25	Male	18	05	23
	Female	08	00	08
	Total	26	05	31
26-35	Male	09	20	29
	Female	02	01	03
	Total	11	21	32
Total	Male	27	25	52
	Female	10	01	11
	Total	37	26	63

(Source: Excel Output)

It may be inferred that in the age-group of 18-25 years, majority (18 males) completed their graduation course. 20 males in the age-group of 26-35 years completed their post-graduation level course. Out of 63 respondents, only eleven females pursued graduation (10) and post-graduation (01) course. Thus, it may be inferred that number of males pursuing the niche course was more when compared to females.

4.4.2 Course Details

It consists of analysis on Type of Course, Institute Details, Course Completed, Specialization Accomplished, Course Duration and Year of Passing.

4.4.2.1 Type Of Course

Nominal scale based question was asked to seek the response on the type of course pursued by the respondent. The maritime course offers different variants of accomplishments of course such as Degree, Post-Graduate Degree, Post-Graduate Diploma and Certificate.

Table 4- 93 Type Of Course

Course Type	Frequency	Percent
Graduate Degree	37	59
Post-Graduate Diploma	26	41
Total	63	100

(Source: Excel Output)

37 respondents had enrolled for a Graduate Degree course. 26 respondents had enrolled for Post-Graduate Diploma course. 59% respondents enrolled for a graduate degree programme, to seek the basic or elementary graduation degree. 41% enrolled for seeking Post-Graduate Diploma qualifications. In the maritime course run by different institute, it awards either degree or diploma to the aspirants.

Table 4- 94 Cross-Tabulation Of Eligible Qualification And Course Pursued

Eligible Qualification	Course Pursued		
	Graduate Degree	Post-Graduate Diploma	Total
Under-Graduate	37	00	37
Graduate	00	26	26
Total	37	26	63

(Source: Excel Output)

It may be inferred that 37 students who studied till school-level enrolled for Graduate degree course. 26 students, who had pursued graduation, had enrolled for a Post-Graduate Diploma in maritime sector. In the qualitative telephonic discussion, it was known that students enrolled in the maritime course for better prospects.

4.4.2.2 Institute Details

A nominal single choice question was asked to the respondents to know the name of the institute in which they were pursuing the maritime course. B.K. School of Business Management, Ganpat University and Gujarat Maritime University were the options suggested from which the respondent had to choose the one applicable to them.

Table 4- 95 Institute Details

Institute	Frequency	Percent
B.K.School of Business Management	26	41
Ganpat University	35	56
Gujarat Maritime University	02	03
Total	63	100

(Source: SPSS Output)

26 respondents (41%) had pursued maritime sector studies from B.K. School of Business Management. 35 respondents (56%) had studied from Ganpat University and two respondents (three percent) had studied in Gujarat Maritime University. B.K. is one of the leading and oldest institutes and Ganpat University runs many different types of maritime courses, so majority of

the respondents were from these premier institute. Gujarat Maritime University is in nascent stage and hence less number of alumni was available for the survey.

4.4.2.3 Course Enrollment

A single choice question was asked to the respondent to know the name of the course they had pursued.

Table 4- 96 Course Enrollment

Course	Frequency	Percent
Post-Graduate Diploma in Maritime Management (PGDM)	26	41
Bachelors in Technology (B. Tech)	35	56
Post-Graduate Diploma in Maritime Law (PGDM-Law)	02	03
Total	127	100

(Source: Excel Output)

It may be inferred that 56% had completed Bachelors in Technology programme, run by Ganpat University. 41% had accomplished Post-Graduate Diploma in Maritime Management (PGDM), run by B.K. School of Business Management and three percent had enrolled in Post-Graduate Diploma in Maritime Law (PGDM-Law), run by Gujarat Maritime University.

4.4.2.4 Specialization Accomplished

A multiple choice nominal question was asked to know the specialization enrolled in by the students. Broadly, specialization offered in the maritime course was Port Management, Logistics and Shipping Management, Marine Engineering, Nautical Science and Maritime Law.

Table 4- 97 Specialization Selection

Specialization	Frequency	Percent
Port Management	06	10
Logistics and Shipping Management	20	32
Marine Engineering	35	55
Maritime Law	02	03
Total	63	100

(Source: Excel Output)

It may be inferred that 10% had specialization in Port-Management, 32% had completed specialization in Logistics and Shipping Management. 55% had pursued Marine Engineering and three percent had studied Maritime Law. B.K. School offers specialization in Port-Management and Logistics and Shipping Management in its PGDM course. Ganpat University offers Marine Engineering under specialization in B.Tech. Maritime Law is the specialization offered by Gujarat Maritime University under PGDM-Law programme.

4.4.2.5 Course Duration

A single choice nominal question was asked to know the duration of the course, which was categorized as less than one year, one year, two years and more than two years.

Table 4- 98 Course Duration

Duration	Frequency	Percent
1 Year	02	03
4 Years	35	56
2 Years	26	41
Total	63	100

(Source: Excel Output)

56% had completed a four years course; 41% had pursued two years course and three percent had pursued one year's duration course. The PGDM-Law programme of Gujarat Maritime University is one year duration course. The PGDM course of B.K. School is of two years and four years B.Tech course is run by Ganpat University.

4.4.2.6 Year of Passing

The details pertaining to the alumni's year of passing is mentioned below.

Table 4- 99 Course Duration

Year	Frequency	Percent
2009	06	10
2011	01	02
2012	02	03
2013	04	06
2014	01	02
2015	06	10
2016	03	05
2017	03	05
2018	18	29
2019	12	19
2020	07	11
Total	63	100

(Source: SPSS Output)

It may be inferred that as high as 29% alumni had passed recently in the year 2018, followed by 19% in the year 2019. 11% alumni had accomplished the maritime education in the year 2020. 10% each alumnus had passed in the year 2009 and the year 2015. Six percent cleared in 2013. Each five percent alumni had completed their maritime studies in the year 2016 and 2017. Out

of the surveyed respondents three percent had finished their maritime related studies in the year 2012. In the year 2011 and 2014 each two percent respondents had completed their maritime related course. In the research an attempt was made to collect the responses from the senior most and junior most alumni. Questionnaire was floated to many alumni, but the response rate was high only from the pass-outs of latest years.

Table 4- 100 Experience Of Alumni

Gender	Total	Mean	SD
Male	52	4.73	3.50
Female	11	3.73	2.10

(Source: SPSS Output)

Considering the analysis year as 2021, the alumni's experience was computed. The year of passing was subtracted from the benchmark year 2021 in order to compute the experience. It may be inferred that 52 males had on an average experience of 4.73 years with a SD of 3.50 years. 11 females had mean experience of 3.73 years with a SD of 2.10 years. Male have more experience than female may because they started quite early to perform the job.

4.4.3 Inception of Foremost Job

It consists of analysis on Mode of Placement, Clearance of Specialized Exams, First Company, First Designation, Starting Salary, and Rating of Initial Salary.

4.4.3.1 Mode Of Placement

A multiple-choice question was probed to the respondents to know how they availed placements.

Table 4- 101 Mode Of Placement

Particulars	Response	Percent
Campus Placement	32	51
Through Portal	05	08
Through References	26	41
Total	63	100

(Source: SPSS Output)

It may be inferred that 51% alumni availed their first job through campus placements. 41% alumni used referral sources to acquire their first job. Eight percent alumni had registered on the job portal and were successful in getting their first job. The alumni might have searched the company and availed the first job or the company might have searched the prospective employee from the details mentioned in the job portal and was eventually absorbed in the company on

completion of the interview process. Students often considered campus placements as a matter of pride in fetching their first job.

4.4.3.2 Clearance Of Specialized Exams

A dichotomous question was asked to the alumni if they had cleared any specialized exams to get into the marine sector jobs. It was learnt that 61 respondents (97%) did not appear for any specialized exams. Only two respondents (three percent) had appeared for the specialized exam. It may be inferred that if the course pursued were in the marine sector, then there was no necessity for appearing for the specialized exams. Maritime course in itself is a niche and specialized course targeted towards skill-building in the marine sector.

4.4.3.3 First Company And First Designation

An open-ended question was asked to the respondents to elicit information on the name of the first company in which they started their career.

Table 4- 102 Name Of The Company And Career Inception

Company	Frequency
Aatash Norcontrol Ltd	02
Adani Hazira Port Pvt Ltd	24
Allcargo Logistics	02
Ambuja Cement Logistics	02
Ami Global Logistics Pvt Ltd	01
BW Maritime Pvt Ltd	01
Cargo Partner Logistics India Pvt. Ltd.	01
Chartered Logistics Ltd	01
Deep Industries Ltd	01
Essar Logistics Ltd	01
Five Stars Shipping Company PVt. Ltd.	06
Gujarat Logistics	02
Hind Terminals Pvt Ltd	01
IA Marine and Metal	01
Interocean Shipping (India) Pvt. Ltd.	01
Mahindra Marine Pvt. Ltd.	01
MSC Agency India Pvt. Ltd	01
Nimbus Maritime Services Pvt. Ltd.	03
Nysa Shipping	01
Prakash Chemicals International Pvt. Ltd.	01
Samsara Shipping Pvt. Ltd.	01
Spectra Shipping Pvt. Ltd.	01

Company	Frequency
Strait Shipbrokers India Pvt. Ltd.	01
Thermax Ltd.	02
Transmodal Marine Logistics Pvt. Ltd.	01
Transpek-Silox Industry Pvt. Ltd.	01
Vishal Shipping Agencies Pvt. Ltd.	01
Zebec Marine Services Pvt. Ltd.	01
Total	63

(Source: Excel Output)

It may be inferred that the first job at the start of the career of different respondents is different. Majority 38% respondents started their career with Adani Hazira Port Pvt Ltd. It was also learnt that the first designation in the first company were quite different across all the respondents. Designation like Assistant, Customer Care Executive, Executive, Import/Export Executive, Junior Executive, Management Trainee, Sales Executive, Senior Executive, Trainee, Research Executive etc were common.

4.4.3.4 Starting Salary

A nominal scale-based question was asked to the respondent to know their annual gross salary at the start of their career.

Table 4- 103 Starting Salary Details

Gross Annual Salary (Rs.)	Frequency	Percent
2-3 Lakhs	34	54
3-5 Lakhs	27	42
5-8 Lakhs	01	02
8 Lakhs & above	01	02
Total	63	100

(Source: SPSS Output)

It may be inferred that 54% received starting salary of Rs.2-Rs.3 lakh per annum. 42%

4.4.3.5 Rating Of Initial Salary

On a five-point likert scale of Very Good (5) to Very Poor (1) a question was asked to the respondents to rate their initial salary.

Table 4- 104 Rating Of Initial Salary

Particulars	Frequency	Percent
Very Good	04	06
Good	38	61
Neutral	17	27

Particulars	Frequency	Percent
Poor	04	06
Total	63	100

(Source: SPSS Output)

It may be inferred that 61% considered their initial salary to be good, 27% opined it to be neutral. Only six percent each admitted that their starting salary was very good and poor respectively. The mean (X) salary was rated as 3.67, which was treated as good by the respondents. A standard deviation (SD) of 0.69, indicated consensus in the response. Thus, the specific skill-set pertaining to the niche maritime sector helped the respondents to fetch jobs with good starting salary.

4.4.4 Details Of Present Job

It consists of analysis on Current Organization, Type of Organization, Job Location, Present Designation, Current Yearly Gross Salary and Current Sector.

4.4.4.1 Current Organization

Respondents were asked an open-ended question to mention the name of the company in which they were working at present.

Table 4- 105 Association With Current Organization

Company	Frequency
Aatash Norcontrol Ltd	02
Adani Hazira Port Pvt Ltd	24
Allcargo Logistics	02
Ambuja Cement Logistics	02
Ami Global Logistics Pvt Ltd	01
BW Maritime Pvt Ltd	01
Cargo Partner Logistics India Pvt. Ltd.	01
Chartered Logistics Ltd	01
Deep Industries Ltd	01
Essar Logistics Ltd	01
Five Stars Shipping Company Pvt. Ltd.	06
Gujarat Maritime Board	01
Gujarat Logistics	02
Hind Terminals Pvt Ltd	01
Interocean Shipping (India) Pvt. Ltd.	01

Company	Frequency
Mahindra Marine Pvt. Ltd.	01
MSC Agency India Pvt. Ltd	01
Nimbus Maritime Services Pvt. Ltd.	03
Nysa Shipping	01
Prakash Chemicals International Pvt. Ltd.	01
Samsara Shipping Pvt. Ltd.	01
Spectra Shipping Pvt. Ltd.	01
Strait Shipbrokers India Pvt. Ltd.	01
Thermax Ltd.	02
Transmodal Marine Logistics Pvt. Ltd.	01
Transpek-Silox Industry Pvt. Ltd.	01
Vishal Shipping Agencies Pvt. Ltd.	01
Zebec Marine Services Pvt. Ltd.	01
Total	63

(Source: Excel Output)

It may be inferred that respondents have continued with the same company, with which they had started their career. It was noticed that one respondent was able to move to Gujarat Maritime Board and one respondent did not continue with IA Marine and Metal Company. By far and large, sticking to the same company indicated that either respondents were quite satisfied working with the company or they might have not received appropriate chance to make a shift.

4.4.4.2 Type Of Organization

On a nominal scale respondent were asked to reveal their type of organization, in which they were working. It was learnt that 89% (56 respondents) and 11% (07 respondents) were working in Private and Government Sector respectively. It may be inferred that respondents easily got a chance in the private sector based on merit and skills. In government sector either the vacancy might not be there or due to prevalence of rampant nepotism, all the respondents might not receive a fair chance.

4.4.4.3 Job Location

On a nominal scale a question was probed to elicit response on the job location of the respondents. It was noted that 98% (62 respondents) and two percent (one respondent) worked with in Gujarat and Abroad respectively. Thus, it may be inferred that with in Gujarat there are ample job opportunities, because Gujarat is surrounded by sea and there are many companies

which are involved in domestic or international trade via sea-route. In the qualitative telephonic discussion, it was understood that majority of the respondents were domicile of Gujarat, they were born and brought-up in Gujarat and preferred to work in Gujarat only considering the cozy environment of their home-state. Respondents preferring to work abroad were far and few.

4.4.4.4 Present Designation

An open-ended question was asked to the respondents to know their current designation. Respondents were working as Assistant, Business Executive, General Manager, Junior Executive, Key Accountant, Manager, Marine Engineer, Operations Executive, Project Executive, Senior Executive, Senior Officer and Trainee. It may be inferred that based on the experience the respondents climbed the career ladder. It was also noted that the present designation were same as the starting designation, indicating that either respondents were yet to gain experience to move to the next designation level, or the process of promotions were taking time or there might not be vacancy to promote the respondent to the next level.

4.4.4.5 Current Yearly Gross Salary

An open-ended question was asked to the respondents to know their yearly gross salary. The open-ended question was then transformed into appropriate class interval for better interpretations.

Table 4- 106 Present Gross Annual Salary Package

Salary Range (in Rs.)	Frequency	Percentage
2,00,000-4,00,000	36	57
4,00,001-6,00,000	15	24
6,00,001-8,00,000	05	08
8,00,001-10,00,000	04	06
Above 10,00,000	03	05
Total	63	100

(Source: Excel Output)

It may be inferred that 57% availed salary in the range of Rs.2,00,000 to Rs.4,00,000. 24% received salary between Rs.4,00,001 to Rs.6,00,000. Eight percent respondent were able to draw the salary in the range of Rs.6,00,001 to Rs.8,00,000. Six percent earned a yearly salary in the range of Rs.8,00,001 to Rs.10,00,000 and only five percent earned a yearly salary exceeding Rs.10,00,000. The average salary of the respondents is Rs.5,34,640. The SD in salary is

Rs.2,57,219. Based on the educational qualifications, designation and experience the difference in salary is noted to a large extent.

4.4.4.6 Current Job Sector

A dichotomous question was asked to know that in which sector the respondents were working.

Table 4- 107 Current Job Sector

Job In	Frequency	Percent
Non-Sea Based	37	59
Sea Based	26	41
Total	63	100

(Source: SPSS Output)

It may be inferred that 59% were currently working in Non-Sea Based Jobs and 41% were working in Sea-Based Jobs. There are certain set of challenges associated with the Sea-Based Jobs and hence less number of candidates prefer to enroll for such type of jobs. Non-Sea Based Jobs are relatively easy and comfortable, so majority of the respondents prefer to work for such job.

4.4.5 Opportunities And Challenges In Non-Sea Based Jobs

It consists of analysis on Opportunities and Challenges in Non-Sea Based Jobs.

4.4.5.1 Opportunities In Non-Sea Based Jobs

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the opportunity as perceived by the alumni in the Non-Sea Based Jobs. The reliability statistics was performed and the Cronbach Alpha was noted as 0.91 for 20 items. The Cronbach Alpha value was greater than 0.60. The analysis pertains to 37 respondents who are associated with the Non-Sea Based Job.

Table 4- 108 Opportunities In Non-Sea Based Jobs

Statements	Mean	Std. Deviation
Well defined promotion and career advancement channel in the organization.	3.81	1.00
The starting salary package received was good.	3.38	0.79
Good chances for quick promotions.	3.57	0.96
There are vivid job choices and opportunities in market having expertise in maritime sector.	3.95	0.74

Statements	Mean	Std. Deviation
There is good opportunity to work with Multinational companies.	3.84	1.09
Exposure to International Trade is available.	4.08	0.83
Availability of jobs in market is high within and outside country.	3.78	1.03
Based on the lucrative job offers I can easily switch over from private sector to government sector and vice-versa.	3.81	0.97
As the industry set-up and infrastructure is at one place, there are chances of fewer transfers.	3.68	0.78
The HR and its policies are employee friendly.	4.03	0.83
Enrichment of knowledge due to nature of job.	4.27	0.45
My nature of work is well defined with clear goal setting.	3.76	0.80
Job stability due to niche area of specialization.	4.05	0.66
Job Related (Composite Score)	3.92	0.64
There is personal liking to Shipping related work.	4.00	0.88
Good scope for business after studying in maritime education	3.89	0.84
Education and Personality (Composite Score)	4.11	0.70
Availability of leaves on time.	4.03	0.87
Superiors and Bosses promotes healthy work environment.	4.11	0.77
Organization has a well-defined bonus/increment policy.	3.95	0.85
Performance appraisal is done in a transparent way.	3.76	0.76
Colleagues are supportive and friendly.	4.14	0.67
HR Issues (Composite Score)	3.97	0.69

(Source: SPSS Output)

The mean values in almost all the statements were nearer to four, which indicated an agreement with the statements. The SD less than one, which indicated that there was a strong consensus amongst the respondents with respect to the opportunities listed in the empirical inquiry. The SD greater than one, indicated that alumni had no commonality in their responses. In order to get the better understanding of the opportunities, the statements were clubbed manually for the pre-identified factor and a composite X and SD score was computed. First 13 statements were clubbed under the 'Job Related' factor for which the composite X (3.92) and composite SD (0.64) were computed. Two statements were clubbed under the 'Education and Personality' factor for which the composite X (4.11) and composite SD (0.70) were calculated. Bottom five statements were clubbed under the 'HR Aspect' factor for which the composite X (3.97) and

composite SD (0.69) were figured. For all the three factors it may be noted that the composite mean score was nearer to four, which indicated agreement to the factor and an SD less than one, highlighted strong consensus.

4.4.5.2 Challenges In Non-Sea Based Jobs

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the challenges as perceived by the alumni in the Non-Sea Based Jobs. The reliability statistics was performed and the Cronbach Alpha was noted as 0.87 for 23 items. The Cronbach Alpha value was greater than 0.60. The analysis pertains to 37 respondents who are associated with the Non-Sea Based Job.

Table 4- 109 Challenges In Non-Sea Based Jobs

Statements	Mean	Std. Deviation
The promotion does not take place quickly.	3.27	0.90
Salary is lower compared to other jobs.	2.95	0.94
Gender discrimination takes place in the organization.	2.78	1.06
Up gradation of skills is time consuming and costs very high.	3.49	0.96
Frequent changes in international trade norms/currency rates lead to stiff competition and creates tough situation for jobs.	3.41	0.96
The opportunity is less in home country compared to foreign nations.	3.54	0.96
There is a lack of Job Opportunities due to changing industry dynamics.	3.11	0.97
Frequent transfers are part of job.	3.14	1.03
For promotions certain specialization or skills are required which could be availed through courses, but such courses are not available in the country.	3.62	0.83
High salary discrimination amongst employees even if they are working on the same level (cadre).	3.46	0.87
There is lack of cooperation from top management.	3.78	0.71
Subordinates do not cooperate.	3.89	0.97
There is no bottom-up feedback mechanism.	3.73	0.80
Job Related (Composite Score)	3.38	0.59
Work is to be done from far off locations which are often away from urban areas.	3.35	1.01
Location Constraints (Composite Score)	3.35	1.01
Market dependent sector leads to frequent layoffs and job instability.	3.27	0.77

Statements	Mean	Std. Deviation
The chances of Job Placement are less if the particular segment of the industry faces slow-down.	3.30	0.91
Government regulations and support are not adequate to the shipping and port companies.	3.76	0.93
Job Environment (Composite Score)	3.41	0.83
Inability to maintain Work Life Balance due to nature of the job.	3.24	1.12
Family Related Constraints (Composite Score)	3.24	1.12
Company nominates for training on timely basis.	3.78	0.92
Employees are often sent for counseling.	3.73	0.80
As a part of career development company promotes the employees on timely basis.	3.86	0.79
Company helps in career planning of the employees.	3.84	0.87
The reward system is fair and transparent.	3.70	0.85
HR Interventions (Composite Score)	3.84	0.80

(Source: SPSS Output)

The mean values in almost all the statements were nearer to four, which indicated an agreement with the statements. The SD less than one, which indicated that there was a strong consensus amongst the respondents with respect to the challenges listed in the empirical inquiry. The SD greater than one, indicated that alumni had no commonality in their responses. In order to get the better understanding of the challenges, the statements were clubbed manually for the pre-identified factor and a composite X and SD score was computed. First 13 statements were clubbed under the 'Job Related' factor for which the composite X (3.38) and composite SD (0.59) were computed. One standalone statement highlighted 'Location Constraint' factor for which the normal X (3.35) and normal SD (1.01) were noted. Later on three statements were clubbed under the 'Job Environment' factor for which the composite X (3.41) and composite SD (0.83) were calculated. One standalone statement highlighted 'Family Related Constraint' factor for which the normal X (3.24) and normal SD (1.12) were noted. Bottom five statements were clubbed under the 'HR Interventions' factor for which the composite X (3.84) and composite SD (0.80) were figured out. For all the five factors it may be noted that the composite mean score was nearer to four, which indicated agreement to the factor and an SD less than one,

highlighted strong consensus. For factor Location Constraints and Family Related Constraints the SD was greater than one, which means that the surveyed alumni had different opinions.

4.4.6 Opportunities And Challenges In Sea Based Jobs

It consists of analysis on Opportunities and Challenges in Non-Sea Based Jobs.

4.4.6.1 Opportunities In Sea Based Jobs

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the opportunity as perceived by the alumni in the Sea Based Jobs. The reliability statistics was performed and the Cronbach Alpha was noted as 0.86 for 19 items. The Cronbach Alpha value was greater than 0.60. The analysis pertains to 26 respondents who are associated with the Sea Based Job.

Table 4- 110 Opportunities In Sea Based Jobs

Statements	Mean	Std. Deviation
The marine sector is a growing sector.	2.19	0.85
There is well defined promotion and career advancement channel in my organization.	2.31	0.79
Quick promotions are availed in my organization.	2.58	0.86
Joining after leave is easy.	2.54	0.91
On boarding at ship is immediately available after I return from the leave.	2.50	0.86
Enrichment of knowledge on duty.	2.08	0.56
Crew member are supportive and like family members.	2.35	0.69
Captain promotes healthy work environment.	2.35	0.69
Duties and shift are well laid out and transparent.	2.38	0.80
Shore leaves are adequate.	2.12	0.65
Job Related (Composite Score)	2.35	0.49
My job fulfils personal liking for long travelling and sea voyages.	2.38	0.85
It provides opportunity to travel in foreign countries.	2.69	0.88
Commanding fleet of personnel is a good task.	2.54	0.81
In my current job I get chance to work with a multinational crew.	2.50	0.76
Personality Related (Composite Score)	2.65	0.80
Well defined leaves like earned leave, casual leave, maternity/paternity leave, etc.	2.65	0.94
Organization provides knowledge about various applicable laws and on the job learning.	2.04	0.20

Statements	Mean	Std. Deviation
Company often nominates me for training programmes.	2.00	0.40
Company has very good HR policy and practice.	1.96	0.34
HR Policies (Composite Score)	2.31	0.47
Marine course provides an opportunity for working in different types of jobs.	2.38	0.80
Course Related (Composite Score)	2.38	0.80

(Source: SPSS Output)

The mean values in almost all the statements were nearer to three, which indicated a neutral response to the statements. Statements whose mean score was less than 2.5 indicated disagreement with the statements. The SD less than one, which indicated that there was a strong consensus amongst the respondents with respect to the opportunities listed in the empirical inquiry. In order to get the better understanding of the opportunities, the statements were clubbed manually for the pre-identified factor and a composite X and SD score was computed. First ten statements were clubbed under the 'Job Related' factor for which the composite X (2.35) and composite SD (0.49) were computed. Later on four statements were clubbed under the 'Personality Related' factor for which the composite X (2.65) and composite SD (0.80) were calculated. Other four statements were clubbed under the 'HR Policies' factor for which the composite X (2.31) and composite SD (0.47) were figured out. One standalone statement highlighted 'Course Related' factor for which the normal X (2.38) and normal SD (0.80) were noted. For all the four factors it may be noted that the composite mean score was nearer to three, which indicated neutral view to the factor and an SD less than one, highlighted strong consensus.

4.4.6.2 Challenges In Sea Based Jobs

A five-point likert scale (5: Strongly Agree to 1: Strongly Disagree) question was asked to identify the challenges as perceived by the alumni in the Sea Based Jobs. The reliability statistics was performed and the Cronbach Alpha was noted as 0.87 for 28 items. The Cronbach Alpha value was greater than 0.60. The analysis pertains to 26 respondents who are associated with the Sea Based Job.

Table 4- 111 Challenges In Sea Based Jobs

Statements	Mean	Std. Deviation
Difficulty in understanding multi-language and dealing with multi ethnic crew.	3.08	1.16
Discrimination is experienced on the basis of Rank.	3.31	0.97
Discrimination is experienced on the basis of gender.	3.27	0.96
Discrimination is experienced on the basis of Nation/Ethnicity.	3.38	1.06
Discrimination is experienced on the basis of Language.	3.23	1.07
Bullying is experienced in the organization.	3.12	1.03
Longer Working hours due to unavoidable situations like change in sea weather, cyclones, colleague sick, etc.	2.42	0.81
High accident rates are observed.	2.27	0.78
Lack of moving space available leads to physical discomfort for long durations.	2.85	1.01
Difficult to prove competency in the job.	3.19	1.02
Reduction in shore leaves leading to less time to relax and rejuvenate.	2.62	1.02
Job Related (Composite Score)	3.00	0.69
Maritime piracy has risen, leading to threat for crew including death.	3.96	1.18
Stringent maritime laws are making crew accountable for unavoidable circumstances.	2.42	0.76
Criminalization of crew members is a worry due to issues like oil spillage, destruction of sea life, etc.	2.54	1.07
External Factors (Composite Score)	3.04	0.60
Separation from family for long duration is faced due to long voyages in sea.	2.23	0.71
One is away from home for a long duration of time.	2.23	0.71
Lack of social life due to distance from home.	2.42	0.81
Isolation is felt due to staying away from family (friends).	4.19	0.69
Social Issues (Composite Score)	2.96	0.45
Body becomes weak due to different climatic condition and it cannot tolerate different climatic changes.	2.23	0.71
Due to lack of space, time and non-availability of equipments, exercise cannot be carried out.	2.35	0.75
Continuous noise and vibration due to vessel lead to specific body related stress.	2.46	0.91
Problems like shift wise working, change in sleep cycle, etc. faced when on the job.	2.42	0.81

Statements	Mean	Std. Deviation
Sleep and eating disorders are faced on job	2.46	0.91
Threat to suffer from communicable diseases.	2.42	0.81
One feels quite depressed.	2.23	0.71
One is often deprived of sleep.	4.27	0.72
Sea Sickness is felt.	4.27	0.53
Fatigue due to long working hours at ship.	2.42	0.76
Physical Impact (Composite Score)	2.88	0.65

(Source: SPSS Output)

The mean values in almost all the statements were between two and three, which indicated a disagreement to neutral response to the statements. Statements whose mean score was less than 2.5 indicated disagreement with the statements. The SD less than one, which indicated that there was a strong consensus amongst the respondents with respect to the opportunities listed in the empirical inquiry. The SD greater than one, indicated that alumni had no commonality in their responses. In order to get the better understanding of the opportunities, the statements were clubbed manually for the pre-identified factor and a composite X and SD score was computed. First 11 statements were clubbed under the 'Job Related' factor for which the composite X (3.00) and composite SD (0.69) were computed. Later on three statements were clubbed under the 'External Factors' for which the composite X (3.04) and composite SD (0.60) were calculated. Other four statements were clubbed under the 'Social Issues' factor for which the composite X (2.96) and composite SD (0.45) were figured out. Bottom 10 statements were clubbed under the 'Physical Impact' factor for which the normal X (2.88) and normal SD (0.65) were computed. For all the four factors it may be noted that the composite mean score was nearer to three, which indicated neutral view to the factor and an SD less than one, highlighted strong consensus. Those factors whose, mean score was less than three, indicated disagreement to the statements.

4.4.7 Inferential Statistical Analysis

Hypothesis testing was done on the data. The results of the same are discussed below.

4.4.7.1 Test Of Normality Perceived For Opportunities In Non-Sea Based Jobs

H_{034} : Data is normal.

H_{134} : Data is not normal.

Table 4- 112 Test Statistics For Normality Test For Opportunities In Non-Sea Based Jobs

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Well defined promotion and career advancement channel in the organization.	0.28	37	0.00	0.86	37	0.00
The starting salary package received was good.	0.35	37	0.00	0.72	37	0.00
Good chances for quick promotions.	0.32	37	0.00	0.84	37	0.00
There are vivid job choices and opportunities in market having expertise in maritime sector.	0.34	37	0.00	0.79	37	0.00
There is good opportunity to work with Multinational companies.	0.32	37	0.00	0.78	37	0.00
Exposure to International Trade is available.	0.33	37	0.00	0.77	37	0.00
Availability of jobs in market is high within and outside country.	0.31	37	0.00	0.81	37	0.00
Based on the lucrative job offers I can easily switch over from private sector to government sector and vice-versa.	0.31	37	0.00	0.84	37	0.00
As the industry set-up and infrastructure is at one place, there are chances of fewer transfers.	0.36	37	0.00	0.78	37	0.00
The HR and its policies are employee friendly.	0.30	37	0.00	0.79	37	0.00
Enrichment of knowledge due to nature of job.	0.46	37	0.00	0.56	37	0.00
My nature of work is well defined with clear goal setting.	0.32	37	0.00	0.83	37	0.00
Job stability due to niche area of specialization.	0.39	37	0.00	0.66	37	0.00
There is personal liking to Shipping related work.	0.26	37	0.00	0.82	37	0.00
Good scope for business after studying in maritime education	0.25	37	0.00	0.86	37	0.00
Availability of leaves on time.	0.33	37	0.00	0.78	37	0.00
Superiors and Bosses promotes healthy work environment.	0.31	37	0.00	0.78	37	0.00

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Organisation has a well-defined bonus/increment policy.	0.34	37	0.00	0.78	37	0.00
Performance appraisal is done in a transparent way.	0.36	37	0.00	0.80	37	0.00
Colleagues are supportive and friendly.	0.31	37	0.00	0.77	37	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.4.7.2 Test Of Normality Perceived For Challenges In Non-Sea Based Jobs

H_{035} : Data is normal.

H_{135} : Data is not normal.

Table 4- 113 Test Statistics For Normality Test For Challenges In Non-Sea Based Jobs

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
The promotion does not take place quickly.	0.30	37	0.00	0.80	37	0.00
Salary is lower compared to other jobs.	0.30	37	0.00	0.72	37	0.00
Gender discrimination takes place in the organization.	0.26	37	0.00	0.87	37	0.00
Up gradation of skills is time consuming and costs very high.	0.30	37	0.00	0.84	37	0.00
Frequent changes in international trade norms/currency rates lead to stiff competition and creates tough situation for jobs.	0.27	37	0.00	0.88	37	0.00
The opportunity is less in home country compared to foreign nations.	0.28	37	0.00	0.86	37	0.00

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
There is a lack of Job Opportunities due to changing industry dynamics.	0.28	37	0.00	0.81	37	0.00
Frequent transfers is part of job.	0.23	37	0.00	0.89	37	0.00
For promotions certain specialization or skills are required which could be availed through courses, but such courses are not available in the country.	0.35	37	0.00	0.80	37	0.00
High salary discrimination amongst employees even if they are working on the same level (cadre).	0.30	37	0.00	0.84	37	0.00
There is lack of cooperation from top management.	0.40	37	0.00	0.72	37	0.00
Subordinates do not cooperate.	0.30	37	0.00	0.82	37	0.00
There is no bottom-up feedback mechanism.	0.36	37	0.00	0.79	37	0.00
Work is to be done from far off locations which are often away from urban areas.	0.34	37	0.00	0.81	37	0.00
Market dependent sector leads to frequent layoffs and job instability.	0.29	37	0.00	0.78	37	0.00
The chances of Job Placement are less if the particular segment of the industry faces slow-down.	0.27	37	0.00	0.84	37	0.00
Government regulations and support are not adequate to the shipping and port companies.	0.33	37	0.00	0.82	37	0.00
Inability to maintain Work Life Balance due to nature of the job.	0.24	37	0.00	0.90	37	0.00
Company nominates for training on timely basis.	0.32	37	0.00	0.82	37	0.00
Employees are often sent for counseling.	0.31	37	0.00	0.84	37	0.00
As a part of career development company promotes the employees on timely basis.	0.35	37	0.00	0.79	37	0.00
Company helps in career planning of the employees.	0.33	37	0.00	0.81	37	0.00

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
The reward system is fair and transparent.	0.37	37	0.00	0.78	37	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.4.7.3 Test Of Normality Perceived For Opportunities In Sea Based Jobs

H_{036} : Data is normal.

H_{136} : Data is not normal.

Table 4- 114 Test Statistics For Normality Test For Opportunities In Sea Based Jobs

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
The marine sector is a growing sector.	0.44	26	0.00	0.65	26	0.00
There is well defined promotion and career advancement channel in my organization.	0.46	26	0.00	0.60	26	0.00
Quick promotions are availed in my organization.	0.40	26	0.00	0.65	26	0.00
Joining after leave is easy.	0.38	26	0.00	0.73	26	0.00
On boarding at ship is immediately available after I return from the leave.	0.45	26	0.00	0.57	26	0.00
Enrichment of knowledge on duty.	0.44	26	0.00	0.61	26	0.00
Crew member are supportive and like family members.	0.46	26	0.00	0.55	26	0.00
Captain promotes healthy work environment.	0.46	26	0.00	0.55	26	0.00

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Duties and shift are well laid out and transparent.	0.42	26	0.00	0.69	26	0.00
Shore leaves are adequate.	0.46	26	0.00	0.58	26	0.00
My job fulfils personal liking for long travelling and sea voyages.	0.37	26	0.00	0.78	26	0.00
It provides opportunity to travel in foreign countries.	0.36	26	0.00	0.70	26	0.00
Commanding fleet of personnel is a good task.	0.40	26	0.00	0.66	26	0.00
In my current job I get chance to work with a multinational crew.	0.40	26	0.00	0.66	26	0.00
Well defined leaves like earned leave, casual leave, maternity/paternity leave, etc.	0.41	26	0.00	0.62	26	0.00
Organization provides knowledge about various applicable laws and on the job learning.	0.54	26	0.00	0.20	26	0.00
Company often nominates me for training programmes.	0.42	26	0.00	0.56	26	0.00
Company has very good HR policy and practice.	0.47	26	0.00	0.47	26	0.00
Marine course provides an opportunity for working in different types of jobs.	0.42	26	0.00	0.69	26	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.4.7.3 Test Of Normality Perceived For Challenges In Sea Based Jobs

H_{037} : Data is normal.

H_{137} : Data is not normal.

Table 4- 115 Test Statistics For Normality Test For Challenges In Sea Based Jobs

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Difficulty in understanding multi-language and dealing with multi ethnic crew.	0.33	26	0.00	0.80	26	0.00
Discrimination is experienced on the basis of Rank.	0.38	26	0.00	0.71	26	0.00
Discrimination is experienced on the basis of gender.	0.39	26	0.00	0.64	26	0.00
Discrimination is experienced on the basis of Nation/Ethnicity.	0.33	26	0.00	0.83	26	0.00
Discrimination is experienced on the basis of Language.	0.34	26	0.00	0.79	26	0.00
Bullying is experienced in the organisation.	0.30	26	0.00	0.75	26	0.00
Longer Working hours due to unavoidable situations like change in sea weather, cyclones, colleague sick, etc.	0.47	26	0.00	0.53	26	0.00
High accident rates are observed.	0.48	26	0.00	0.54	26	0.00
Lack of moving space available leads to physical discomfort for long durations.	0.34	26	0.00	0.75	26	0.00
Difficult to prove competency in the job.	0.36	26	0.00	0.72	26	0.00
Reduction in shore leaves leading to less time to relax and rejuvenate.	0.34	26	0.00	0.77	26	0.00
Maritime piracy has risen, leading to threat for crew including death.	0.28	26	0.00	0.79	26	0.00
Stringent maritime laws are making crew accountable for unavoidable circumstances.	0.44	26	0.00	0.59	26	0.00
Criminalisation of crew members is a worry due to issues like oil spillage, destruction of sea life, etc.	0.35	26	0.00	0.77	26	0.00
Separation from family for long duration is faced due to long voyages in sea.	0.47	26	0.00	0.56	26	0.00
One is away from home for a long duration of time.	0.47	26	0.00	0.56	26	0.00
Lack of social life due to distance from home.	0.47	26	0.00	0.53	26	0.00
Isolation is felt due to staying away from family (friends).	0.26	26	0.00	0.80	26	0.00

Statements	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Body becomes weak due to different climatic condition and it cannot tolerate different climatic changes.	0.47	26	0.00	0.56	26	0.00
Due to lack of space, time and non-availability of equipments, exercise cannot be carried out.	0.49	26	0.00	0.49	26	0.00
Continuous noise and vibration due to vessel lead to specific body related stress.	0.43	26	0.00	0.66	26	0.00
Problems like shift wise working, change in sleep cycle, etc. faced when on the job.	0.47	26	0.00	0.53	26	0.00
Sleep and eating disorders are faced on job	0.43	26	0.00	0.66	26	0.00
Threat to suffer from communicable diseases.	0.47	26	0.00	0.53	26	0.00
One feels quite depressed.	0.47	26	0.00	0.56	26	0.00
One is often deprived of sleep.	0.27	26	0.00	0.79	26	0.00
Sea Sickness is felt.	0.39	26	0.00	0.70	26	0.00
Fatigue due to long working hours at ship.	0.44	26	0.00	0.59	26	0.00

(Source: SPSS Output)

It may be inferred that the p-value is $0.00 < 0.05$, therefore the null hypothesis is rejected. In other words it indicates that the data is not normal. Shapiro-Wilk test is more suitable for sample size less than 50 (i.e. small sample) and Kolmogorov Smirnova test is more suitable for sample size greater than 50 (i.e. large sample). Referring at the test-statistic of both the type of test, the p-value is noted to be less than 0.05, hence data is not normal. If the data is not normal then the parametric test would not be suitable. Therefore, only non-parametric test is used in the further analysis.

4.4.7.4 Fisher's Exact Test

H_{038} : There is no association between gender and type of course pursued.

H_{138} : There is an association between gender and type of course pursued.

Table 4- 116 Test Statistics For Fisher's Exact Test

Gender	Type of Course		Total
	Graduate Degree	Post-Graduate Diploma	
Male	27	25	52
Female	10	01	11

Gender	Type of Course		Total
	Graduate Degree	Post-Graduate Diploma	
Total	37	26	63
Fisher's Exact Test Value			5.69
P-value (2-Sided)			0.02

(Source: SPSS Output)

It may be inferred that the p-value is $0.02 < 0.05$, therefore the null hypothesis is rejected. It may be understood that there is an association between gender and type of course pursued. From the cross-tabulated data it may be inferred that 27 males had enrolled for a degree in maritime stream. 25 males had enrolled in post-graduate diploma course. Only 11 females had enrolled for graduate degree (10) and post-graduate diploma (one). It may be inferred that less number of females were enrolling in the niche maritime stream. The reason for low enrollment of female would be either due to lack of awareness or perception of tough working conditions in sea-based jobs or family might not support the idea of such unconventional job wherein the female might have to be away from home if they undertake such sea-based jobs.

4.4.7.5 Fisher's Exact Test

H_{039} : There is no association between gender and initial salary.

H_{139} : There is an association between gender and initial salary.

Table 4- 117 Fisher's Exact Test Statistics

Gender	Initial Salary		Total
	Poor	Good	
Male	04	48	52
Female	00	11	11
Total	04	59	63
Fisher's Exact Test Value			0.90
P-Value (2-Sided)			1.00

(Source: SPSS Output)

It may be inferred that the p-value is $1.00 > 0.05$, therefore the null hypothesis is not rejected. It may be understood that there is no association between gender and initial salary. From the cross-tabulated data it may be inferred that 48 males and 11 females considered their starting salary to be good. Only four males considered it to be poor. From the literature review it was noted that there is a dearth of manpower in this niche sector. Those people have a specific skill set equipped for the maritime sector would stand a good chance in terms of quick placements and good pay. This would be a primary reason for no discrimination in salary.

4.4.7.6 Fisher's Exact Test

H_{040} : There is no association between gender and sector of job.

H_{140} : There is an association between gender and sector of job.

Table 4- 118 Fisher's Exact Test Statistics

Gender	Sector of Job		Total
	Non-Sea Based	Sea Based	
Male	34	18	52
Female	03	08	11
Total	37	26	63
Fisher's Exact Test Value			5.44
P-Value (2-Sided)			0.04

(Source: SPSS Output)

It may be inferred that the p-value is $0.04 < 0.05$, therefore the null hypothesis is rejected. It may be understood that there is an association between gender and sector of job. From the cross-tabulated data it may be inferred that 34 males and 18 males respectively preferred non-sea based and sea-based jobs. Whereas, three females and eight females respectively preferred non-sea based and sea-based jobs. As the survey pertains to the alumni, those people have been working in the respective sector since many years and hence have developed the liking for the same. It may be noted that 73% females were working in sea-based jobs and just 35% males were working in sea-based jobs. It may be assumed that the females were very clear to pursue a course in maritime sector and also perform their duty in the same. Those women had no apprehensions on working in the sea-based maritime sector and that was the reason that even after the average experience of 3.73 or 4 years and SD of 2.10 years, they were working in the same sector. It may be assume that either passion or lucrative pay, did not allow them to make a shift.

4.4.7.7 One-Way Chi-Square Test (Test Of Goodness Of Fit)

One Way Chi-Square Test was administered to check out the source of placements.

H_{041} : There is no significant difference in the proportion of various sources of placements.

H_{141} : There is a significant difference in the proportion of various sources of placements.

Table 4- 119 Chi-Square Test Statistics

Sources of Placements	Observed	Expected
Through Campus	32	21
Through Portal	05	21

Sources of Placements	Observed	Expected
Through References	26	21
Total	63	63
Chi-Square Value	19.14	
P-Value	0.00	

(Source: Excel Output)

It may be inferred that p-value is $0.00 < 0.05$, which means the H_{021} is rejected. There is a significant difference between the observed and the expected value. Majority of the alumni were placed in their first job through campus placements. Some of them used their references to fetch the first job. A handful of them had registered on the online job portals and had availed job through the same. It may be appreciated that the educational institutes are not only into providing education and imparting skills but they are also taking the responsibility of their students to place them. Higher the campus placements, higher would be enrollment of students in such colleges.

4.4.7.8 Mann-Whitney U Test On Opportunities In Non-Sea Based Jobs

A Mann-Whitney U was applied to check the significant difference on perception of opportunity in non-sea based jobs between the genders. The hypothesis was framed as

H_{042} : Male and female do not significantly differ in the perception of opportunity in non-sea based jobs.

H_{142} : Male and female significantly differ in the perception of opportunity in non-sea based jobs.

Table 4- 120 Results Of Mann-Whitney U Test

Perceived Opportunities	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Job Related	Male	34	19.78	672.50	24.50	-1.68	0.09
	Female	03	10.17	30.50			
Education and Personality	Male	34	19.12	650.00	47.00	-0.24	0.81
	Female	03	17.67	53.00			
HR Issues	Male	34	19.97	679.00	18.00	-2.28	0.02
	Female	03	8.00	24.00			

(Source: SPSS Output)

The Sig. P-value for Mann-Whitney U Test for Job Related and Education and Personality factors is more than 0.05, which indicates that the null hypothesis is not rejected. The Sig. P-value for HR issues is less than 0.05, which indicates that the null hypothesis is rejected. Male

and female feel that there are job related opportunities in the non-sea based maritime sector. They also agree to the fact that it suits their education and personality point of view. Male and female differ with respect to the HR Issues.

4.4.7.9 Mann-Whitney U Test On Challenges In Non-Sea Based Jobs

A Mann-Whitney U was applied to check the significant difference on perception of challenges in non-sea based jobs between the genders. The hypothesis was framed as

H₀₄₃: Male and female do not significantly differ in the perception of challenges in non-sea based jobs.

H₁₄₃: Male and female significantly differ in the perception of challenges in non-sea based jobs.

Table 4- 121 Results Of Mann-Whitney U Test

Perceived Challenges	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asym p. Sig. (2-tailed)
Job Related	Male	34	19.93	677.50	19.50	-1.98	0.05
	Female	03	8.50	25.50			
Location Constraints	Male	34	19.00	646.00	51.00	0.00	1.00
	Female	03	19.00	57.00			
Job Environment	Male	34	19.85	675.00	22.00	-1.78	0.08
	Female	03	9.33	28.00			
Family Related Constraints	Male	34	19.56	665.00	32.00	-1.10	0.27
	Female	03	12.67	38.00			
HR Interventions	Male	34	20.22	687.50	9.50	-2.51	0.01
	Female	03	5.17	15.50			

(Source: SPSS Output)

The Sig. P-value for Mann-Whitney U Test for Job Related and HR interventions is less than 0.05, which indicates that the null hypothesis is rejected. The Sig. P-value for Location Constraints, Job Environment and Family Related Constraints is more than 0.05, which indicates that the null hypothesis is not rejected. Male and female have different opinion on job related and HR interventions challenges. With respect to other factors such as Location Constraints, Job Environment and Family Related Constraints male and female also have same opinion.

4.4.7.10 Mann-Whitney U Test On Opportunities In Sea Based Jobs

A Mann-Whitney U was applied to check the significant difference on perception of opportunity in non-sea based jobs between the genders. The hypothesis was framed as

H₀₄₄: Male and female do not significantly differ in the perception of opportunity in sea based jobs.

H₁₄₄: Male and female significantly differ in the perception of opportunity in sea based jobs.

Table 4- 122 Results Of Mann-Whitney U Test

Perceived Opportunities	Gender	N	Mean Rank	Sum of Ranks	Mann Whitney U	Z	Asymp. Sig. (2-tailed)
Job Related	Male	18	12.61	227.00	56.00	-	0.28
	Female	08	15.50	124.00		1.08	
Personality Related	Male	18	12.58	226.50	55.50	-	0.31
	Female	08	15.56	124.50		1.01	
HR Policies	Male	18	13.83	249.00	66.00	-	0.68
	Female	08	12.75	102.00		0.42	
Course Related	Male	18	14.06	253.00	62.00	-	0.50
	Female	08	12.25	98.00		0.68	

(Source: SPSS Output)

The Sig. P-value for Mann-Whitney U Test for all the factors is more than 0.05, which indicates that the null hypothesis is not rejected. It indicates that male and female do not significantly differ in their opinion on perceived opportunities in the sea-based jobs. It their passion, that prompted them to pursue a maritime course. The same passion motivated them to take-up the employment in the maritime sector and remained loyal to the same. Thus, gender difference did not play a role in perception of opportunities in sea-based jobs.

4.4.7.11 Mann-Whitney U Test On Challenges In Sea Based Jobs

A Mann-Whitney U was applied to check the significant difference on perception of challenges in sea based jobs between the genders. The hypothesis was framed as

H₀₄₅: Male and female do not significantly differ in the perception of challenges in sea based jobs.

H₁₄₅: Male and female significantly differ in the perception of challenges in sea-based jobs.

Table 4- 123 Results Of Mann-Whitney U Test

Perceived Challenges	Gender	N	Mean Rank	Sum of Ranks	Mann Whitney U	Z	Asymp. Sig. (2-tailed)
Job Related	Male	18	12.94	233.00	62.00	-	0.54
	Female	08	14.75	118.00		0.61	

Perceived Challenges	Gender	N	Mean Rank	Sum of Ranks	Mann Whitney U	Z	Asymp. Sig. (2-tailed)
External Factors	Male	18	13.08	235.50	64.50	-	0.49
	Female	08	14.44	115.50			
Social Issues	Male	18	12.64	227.50	56.50	-	1.25
	Female	08	15.44	123.50			
Physical Impact	Male	18	13.00	234.00	63.00	-	0.56
	Female	08	14.63	117.00			

(Source: SPSS Output)

The Sig. P-value for Mann-Whitney U Test for all the factors is more than 0.05, which indicates that the null hypothesis is not rejected. It indicates that male and female do not significantly differ in their opinion on perceived challenges in the sea-based jobs. It may be inferred that male and female alumni might be facing some challenges but the passion of career does not allow them to relatively discriminate the challenges based on their gender. It might be that they would have objectively accepted those challenges before enrolling in the sea-based jobs.

CHAPTER-5

DATA FINDINGS, SUGGESTIONS AND CONCLUSION

5.0 Background

The findings are divided into three sections viz., Section-I Challenges Faced by Women Working in Maritime Sector, Section-II Recruiters Perception on Employability of Women, Section-III Opportunities and Challenges Perceived by Existing Students and Alumni. The details are discussed as under.

5.1 Section-I Challenges Faced By Women Working In Maritime Sector

(A) Women Working In Non-Sea Based Jobs

- **Location:** The majority of women were working in port- locations of Jamnagar (48%), Surat (47%) and non-port locations Gandhinagar (35%). The offices near the port were involved in the core activity of the shipping of the goods and the office away from the port were involved in more documentation, record-keeping and administration-oriented work. The study tried to cover the port places of entire Gujarat, so that a broader view may be obtained for studying the challenges, if any, faced by the women working in the maritime sector, across different locations.
- **Age:** The majority of 53% of respondents were less than 30 years and only one per cent were below 60 years of age. There would have recently been fresh recruitments and that is why a majority of the women working in the sector are young. The sector might have opened up for new recruitments based on its requirement for different work profiles or it might have recruited on the vacant post, as a replacement towards retired posts or post vacant due to employees leaving the organization.
- **Educational Qualifications:** The majority 62% of respondents availed of a post-Graduate degree. Highly qualified candidates, who possess both skills as well as a degree certificate, tend to receive good placement in the maritime industry. Graduation is the minimum norm for an administrative job also offers good career opportunities in the maritime sector. A good educational qualification opens the gate for white-collared jobs.

- **Stream Of Education:** As high as 50% pursued the education in Commerce stream. The job profile offered would differ on the stream of education and the completion of the final degree.
- **Maritime Specific Course:** 73% of respondents did not pursue any maritime specific course. they had either pursued Master of Business Administration in Maritime or Master of Legal Law. The specialization was either in Port Management or Logistics and Shipping Management or Maritime Law or International Law. The student of any stream may access the job opportunities flourishing in the maritime sector.
- **Marital Status:** The majority of the 62% respondents were married. Women often had to succumb to either family pressure or the final word from the head of the family to opt for a particular type of job. Unmarried women enjoyed liberty in job selection, provided the family support was positive.
- **Number of Children:** 61% of respondents had no children. 25% had one child and 14% had two children. For a woman, the responsibility of upbringing the child is immense. The child care responsibility becomes very difficult if the woman is working.
- **Nature of the Employment:** The majority of the 40% respondents were Outsourced by the organization. Under outsource, model the company recruits through manpower supply service agency. Such respondents work in the maritime sector, but they are considered an employee of the agency and not the company in which they are working. Many government organizations, to ease out the burden of creating a permanent liability, have started using either outsource model or the contractual model.
- **Organizational Level:** The majority of the 46% of respondents worked at the middle level. Based on the performance and work experience the employee progress from entry-level to the top level. As the majority of the respondents were below 30 and 40 years of age, they tend to be at either entry or middle level. Based on the graduation degree the respondents were able to work at the entry-level and over some time with experience they were able to climb the career ladder. The post-graduate pupil has good domain knowledge and hence companies prefer to absorb them at senior level after the due assessment of skills set. The conventional degree and post-graduate degree, also provide the pupil with a chance to work in the maritime sector. basic conceptual clarity would

provide a chance to work in the maritime sector and gaining the domain knowledge in the same sector when working on the job, may help the employee to excel in the field, through competency and skills. All the streams of education open up the opportunity to work in the maritime sector and that too at various cadres.

- **Current Department:** Women were working across different departments of the organization. Maritime sector offered desk jobs for women which were of a similar type as offered in the different conventional sectors such as banking, insurance etc.
- **Work-Experience in Maritime Sector:** Women on average (mean=X) had worked in the maritime sector for 4.05 years. The Standard Deviation (SD) was noted as 3.84 years.
- **Organizational Peculiarities:** The lack of awareness and typical mindset/stereotype approach are bigger causes for fewer numbers of females working in the maritime sector. Despite the job at par with other job sectors, the participation is below five per cent as observed or reported in the research there is a lack of awareness amongst the general public and also the sector has been male-dominated throughout the centuries and hence it is still considered inappropriate for females to join.
- **Total Work-Experience:** The statistics indicated that women on an average (mean=X) had worked in the current organization for 3.22 years. The Standard Deviation (SD) was noted as 3.19 years. A transition from the conventional sector to the maritime sector is also possible. It is customary to note that organization nowadays offers induction training to the new joiner to make them better equipped with the work profile and work culture. Such training would bridge the gap and make the employee accustomed to the maritime work profile.
- **Gross Annual Salary:** 57% of respondents received an annual salary less than Rs.3,00,000. Maritime sector offered handsome salary package. If the women avail a job which is back-office in nature and draws a good amount of salary, then it becomes a cosy place to remain or get associated with the organization for a longer period. Despite not being on payroll, they derive starting salary of at most Rs.30,000 and the package keeps improving based on their qualification and experience. Contractual employees also derive a salary of more than Rs.7,00,000. In such a competitive scenario, if the females get to start in the maritime sector with a good salary and that too with back-

office work, it is considered as a blessing to generate second income by carrying out a cosy work. Higher educational qualifications accompanied by skills and work experience may provide an added advantage to draw a higher salary.

- **Challenges:** The challenges faced by women working in the maritime sector in the non-sea-based jobs were mainly work-life balance, training discrimination, pay and promotion, leave policies, career development, workplace bullying, and job peculiarities.

Table 5- 1 Challenges Faced By Women

Challenges	Agreed (%)
Work-Life Balance	40
Training Discrimination	07
Pay and Promotion	20
Leave Policies	10
Career Development	10
Work-Place Bullying	13
Total	100

(Source: Author's Own Compilation)

- **Turnover Intentions:** 97% had no turnover intentions, as they were comfortable in their current job. Only three per cent were looking for the change.
- **Inferential Statistics:** Is discussed as under.

Table 5- 2 Major Findings from Hypothesis Testing

Null Hypothesis	Test Administered	Statistical Result	Interpretation
There is no significant difference in the proportion of the type of employment.	One Way Chi-Square Test	Significant	As high as 163 respondents were working on other than the permanent type of job. The trend of recruitment in the public sector and private sector is based on the contractual or outsourcing model.
Unmarried and Married females do not significantly differ in their opinion on work-life balance.	Mann-Whitney U Test	Not-Significant/ Significant	Unmarried and married females do not significantly differ in their opinion on work-life balance. Unmarried women also had to shoulder the responsibility of dependents or might have to handle

Null Hypothesis	Test Administered	Statistical Result	Interpretation
			<p>things single-handedly without any support.</p> <p>Unmarried and married women significantly differed on the issue of time-balancing concerning work or non-work activities. If a married woman is a mother, she would be spending a lot of time in non-work activities, especially child-care, which might not be the case with unmarried women and hence, at this point both of them have different opinions.</p> <p>The respondents also significantly differed on performing the work without getting burned out. A person can work efficiently without pressure if she is productive. The productivity is largely dependent on the cent per cent concentration while working. Usually, the married woman carries the domestic, children and household mental load, at the workplace, and so her attention gets divided and she experiences burn-out while executing her job. This might not be the case in the workplace with unmarried women.</p>
<p>Unmarried and Married females do not significantly differ in their opinion on workplace bullying.</p>	<p>Mann-Whitney U Test</p>	<p>Not-Significant/ Significant</p>	<p>Unmarried and married females significantly differed in their opinion on workplace bullying. The married and unmarried women differed on workplace bullying such as shifting of assignments to male, assignment of work below calibre, constant work monitoring, no information sharing, exclusion from work-shop activities and denial from leave, training without reason.</p> <p>Unmarried and married females did not significantly differ in their opinion on no difference was noted for work undervaluation, verbal-nonverbal threats, inappropriate remarks, impossible deadline, the spread of</p>

Null Hypothesis	Test Administered	Statistical Result	Interpretation
			personal false rumours, offensive remarks, signals to resign, repeated reminders for mistakes, neglect of opinions, compulsion to attend extra meetings, use of disciplinary or competence as a threat.
Unmarried and Married females do not significantly differ in their opinion on turnover intentions.	Mann-Whitney U Test	Not-Significant	Unmarried and married females were quite comfortable working in the current organization and they did not wish to switch over. If the employee is satisfied at the workplace, she may not have any turnover intentions and the attrition ratio of that organization would be low.
There is no correlation between work-life balance and turnover intentions.	Spearman's Rank Correlation	Significant	There was a negative correlation between work-life balance and turnover intentions. If work-life balance is low then turnover intentions would be high.
There is no correlation between training discrimination and turnover intentions.			The correlation was positive. The individual variables and turnover intentions moved in the same direction. The relation was positive and moderate.
There is no correlation between pay and promotion and turnover intentions.			
There is no correlation between leave policies and turnover intentions.			The correlation was positive. The individual variables and turnover intentions moved in the same direction. The relation was positive and weak.
There is no correlation between career development and turnover intentions.			The correlation was positive. The individual variables and turnover intentions moved in the same direction. The relation was positive and moderate.
There is no correlation between workplace bullying and turnover intentions.			
There is no correlation between job peculiarities and turnover intentions.			

(Source: Researcher's Compilation)

(B) Women Working in Sea-Based Jobs

- **Location**

Since it is a maritime sector, most of Industries/organisations are based in port areas; the responses received and area of research is conducted covering female employees working mainly in port areas. However, because some organisations have their headquarters in Gandhinagar/Ahmedabad, female employees working at the headquarters are also covered.

- **Education And Stream**

Due to the nature of the job necessitates a certain level of education, the majority of females are either graduates or postgraduates. Furthermore, employment has been observed in all of the major educational streams, including science, commerce, arts and others. Thus, the perception that the maritime sector requires only science/marine based education qualification is false, as existing responses consist of 50 percent commerce graduates, 22 percent arts graduates and 27 percent science graduates. The above further supports the objective one of the research and also the literature review wherein the sector highlights vivid opportunities of employment in maritime sector across various educational and skilled based qualifications.

- **Marital Status**

The study included both married and unmarried females. Furthermore, the married category is divided into two categories: females with children and females without children, there is a good mix of unmarried, married females and females with kids, like most of the other sector jobs

- **Nature Of Job**

It has been observed that most organisations in the sector prefer to hire on a contractual/outsourced basis rather than as a permanent employee.

- **Organizational Peculiarities**

Most of the typical points observed in sea based jobs are not very relevant in non-sea based job reason being the in HR practices and labour laws applicable in other industries can also be implemented in maritime non-sea based jobs and accordingly the respondents have also given their response and affirmation that HR policies, training and other

company benefits are beneficial to them and not much of discrimination observed in the responses received from female employees in comparison to their male counterpart. Although, certain areas like night shifts, core maritime jobs and promotions to senior management, the respondents have highlighted the organization reservation with respect to women like night shifts are not given to the females. Further, at senior management level the numbers of females are found lower in compare to their male counterpart. However, further studies can be conducted in this area. Additionally female employees have also stated that the port location is far away generally from city being the industrial hub leading to long commutation time and generally isolated during night hours, further their numbers are very less compared to males working in the port sector and female skilled labours are negligible.

Although the reason for very low number of females working in port sector non sea based jobs has nothing to do with the gender in the present situation but the lack of awareness and typical mindset/stereotype approach are bigger causes for low numbers. In spite of the job at par with other job sectors the participation is below 5% as observed or reported in the research there is a lack of awareness amongst the general public and also the sector has been male dominated throughout the centuries and hence it is still considered inappropriate for females to join.

- **Quality of Training**

The institute had adequate equipment to train them in machining, fittings, welding, and blacksmith skills. The training was para-military in nature, which instilled confidence, upgraded physical strength, and helped in personality development. The academic aspect was also covered properly. Coping with the male colleagues was also a part of the training, which practically helped to deal with all men on the board.

- **Training Challenges**

The acceptance level was low despite the females were giving their best. They were readily not accepted in the institute or on the ship. There was a lack of motivation. A stereotype was set that female candidates may not be able to do sea-based jobs, they would have to quit. They were physically and mentally strong than men. Institute provided them right kind of training to handle the onboard real challenges.

- **Restriction On Female Employees**

There was a lot of restriction on female employees in comparison to the male employees, with respect to timing, monitoring and additional guidelines. The programme was residential and they were allowed to leave the campus on Saturday and Sunday only.

- **Faculty Behavior**

Faculties were pleasantly surprised to see the female students pursuing the maritime course. Some of them are very supportive, some had apprehensions on their capability and doubted what the female students would do post course completion. Faculties opined that the companies do not recruit the female students and they questioned the students, that why did they join the maritime course. Faculties did not exhibit any negative behaviour. The female students were not allowed to sit for campus placements. During practical trainings they discouraged stating that the place of female student was in the kitchen and not on the ship. In fact faculties expressed that there was no need for the female students to learn the practical. The mentality of the male students towards female classmates was very negative.

- **Male Batchmates Behavior**

The behaviour and interaction of male batch mates towards their female students' colleagues in maritime training institutes was friendly as well as competitive. They often played a role of a critic, had a group mentality, non-acceptance in nature and at times questioning the authorities. The behaviour of male students often changed when they knew that there was nobody to protect the female students, as she had to deal everything on her own. Male students were offensive to remark that company was wasting money when they hired female student. The male cadet was not ready to accept a female leader. The female cadet working on the board commented that they were doing the same work as their male cadet was performing. There was no nothing special or difficult for them when compared to the male cadet.

- **Campus Placements**

The support during campus placement to female students by the respective Maritime Training Institutes was mediocre. Proper representation was done by the candidates as the companies lined up were good. Female students were not allowed to sit in the campus

placement interview. College did not take any interest in the campus placements. College showed big dreams but the reality was different. College seniors complained that they did not get chance to sail. Companies were not recruiting girls.

- **Gender Ratio And Gender Neutrality**

The number of female students generally in courses vs. the male students in most of the Maritime Training Institutes in India was very less, i.e.; 2 female students against 80 male students. The course was gender neutral, but the girls did not join the merchant navy field.

- **Motivation To Join Merchant Navy**

The reason and motivation for joining the niche job segment in maritime being a female was self, parents, friends, mentor or role models for few females. Girls considered that it was a challenge to prove oneself in the maritime career. The thought of ‘doing something different’ motivated the girl students to join Merchant Navy. Girls did not wish to become a table top typical engineer.

- **Awareness About The Sector:**

The awareness about the maritime sector specifically to the girl students was not there. They had heard the word ‘marine’ but ‘merchant navy’ was an alien word for them. Masses lack the awareness on the merchant navy course and that was the biggest reason for low enrolment of the girls. Those girls who had joined the course got to know from School/College, Advertisement, Parents/Relative, Friends/boys.

- **Support/Resistance From Family**

The parents were the primary source of support in choosing the career. They insisted existence was fine, but to achieve something big was the purpose of life. Some of the female cadet faced resistance from their family, because they believed that if boys did not opt for such career then why should one as a girl select merchant navy.

Women cadet believed that being in the seafaring job one needs support from family, parents, spouse and if that support was missing then they had to crush down their dream of becoming a sea-farer or leave the seafaring job and switch to other job.

- **Life After Marriage And Kids:**

The changes in professional and personal life of women seafarers after the marriage and kids was a challenge. The supportive environment from family and husband helped a lot to the sea farers to perform the duty carefree. The guilt feeling of performing the job was very high if the support from family and husband was missing. The work-life balance was not possible when one was on voyage. Work related to the family, bank and office assignments had to be completed before one started the voyage. In the Indian context the responsibility of females were more than females of western countries. Some of the female sea farers, if she was not able to play the domestic role properly then unfortunately, she took divorce or she developed a phobia towards marriage and hence did stayed away from wedding.

After the birth of the kid, women preferred to go on voyage for just two to three days. They also preferred to switch over to shore-based jobs rather than sailing jobs. It was difficult for them to be mother on board. Women sea-farer often signed off her duty when her child was in trouble or there was any emergency. They had to make a choice between career or child, and such psychological dilemma always continued in their mind, at the birth of the baby. Female cadet believed that maternity was an additional responsibility provided by nature. The most ambitious female was afraid to start the family as she might had to give up career post-birth of the kid. They believed that female had to give up the career due to lack of alternative career options, for her the career ladder was to become a captain.

- **Recruitment and Selection**

The companies denied to hire female cadets. Companies were not ready to take the interview of the female students. If the companies took the interview, then it was just for providing experience to the female student. Companies also lacked policies to hire female cadet. Companies at the time of short-listing the female candidate, it would scrutinize the documents very carefully when compared to the male students and the end result was not to select the female cadet.

- **Company Infrastructure, Facilities And Policies For Women**

The medical facilities were not even provided to the women sea-farer on the cargo ship or other ship. There was no special administration for them. Companies did not pay attention to the sanitary needs of female sea-farers. There was no proper mechanism or board to address the harassment case, if the women face such issue. If the board or committee was constituted by the company then it had only male representation, who often failed to understand the psychological trauma of the women. Companies had documented the harassment policy in black and white which provided relief and safety to the women sea-farer.

- **Onboard Male Crew Member's Behaviour**

The superiors were very protective. They appreciated the work and predicted that the women seafarer would one day become an officer. Senior complemented that the women sea-farers worked like the male members only. Male crew member was not accepting the presence of female on board and passed inappropriate remarks, asked them to join shore jobs. The subordinates tried to distract the female seafarers, so that they could find the mistakes in the work, give more work and create a helplessness situation. The physical strength was needed to operate on the ship board, but the task became easy with the support of the crew members. The superiors treated them like a cadet and not women, so one could do any job easily. Male seafarers appreciated the professional approach of women seafarers. Senior officers onboard asked for replacement once they came to know that a female crew was joining them.

- **Culture/Mind-Set**

The female seafarers were questioned on their joining of merchant navy. Their parents were questioned for sending their daughter to merchant navy. Derogatory remarks were made that it was only for money that the girls were sent to sea. The acceptance of female seafarer was not there and on the contrary people tried to shatter their confidence. On the shipboard also it was difficult for males to accept them, they took time and once they accepted it went smooth. Maritime being a male-dominated sector, do not know how to behave, treat and work with females. It was pleasure and proud to work in the male dominated sector. Parents have shown reluctance in most cases for their daughters

joining and post marriage the In-laws and society does question the continuation in the profession. Indian women face more challenges than women in other countries, particularly in Western countries, due to Indian culture and mind-set. Some countries have ban for joining women in maritime

- **Gender Discrimination/Harassment**

The acceptance level of female on-board is still very low. The superiors often discriminate and do not give work and responsibilities and prefer to work with male subordinates. The crew including colleagues and subordinates questions the presence of female on-board. Harassment further has been cited and quoted with examples by the respondents. The basic nature of group mentality and masculinity also possess threat due to low or single number of female on ship. Although, the same has nothing to do with the professional competency and skill of a female seafarer.

- **Career Management**

Due to gender specific and physical role of female, after joining as a seafarer past certain years, marriage, maternity and child rearing becomes important in their life considering biological cycle. Accordingly, in the middle of their career there are frequent gaps and companies do not have well laid out policies for such issues and in comparison to male counterpart the promotion cycle gets delayed and mid-career suffers which may further lead to leaving the entire career as a seafarer aside.

- **Emotions and Feelings**

Above 60 percent females have agreed that they feel isolated, lonely and stressed at times while on board during voyages. Further, they also highlighted that it is necessary to have another female on-board to talk and share personal feelings as a female, in absence of any other female counterparts the problem further aggravates and they have to undergo the stress all alone. Isolation can often take its toll because there are no females to share personnel feelings and thoughts. Some of the issues that may arise include loneliness and homesickness. Working in an environment with limited movement, limited company, and months away from family can often lead to stress.

5.2 Section-II Recruiters Perception On Employability Of Women

The Recruiters Perception on Employability of Women is highlighted through following points:

- **Recruitment Process**

To place the manpower on the board at ship the Director General of Shipping India has mandated that only licenced agencies can only provide manpower to shipping companies in the country. The licensing authority is D.G.Shipping and the companies are known as Recruitment and Placement Services License (RPSL). The agencies have different models that they follows for conducting interview. The following details have been captured:

The manpower are being provided on outsourcing model to ship, where the entire payment and everything being done by the companies. The agencies have to do only recruitment procedure. The second type of recruitment process is campus interview. Some agencies gives advertisement as part of process. Referenced candidates are also considered for the interviewing process. As a part of the process, before boarding the ship, candidates has to be physically fit, so the medical examination is also part of recruitment process.

- **Policy For Hiring Female Employees**

Majorly recruiters confirmed that, the attitude of maritime companies towards female seafarer is a major reason for the low number of females in the maritime industry. The main reason is that companies do not accept women and do not create an environment that encourages the hiring and retention of women. Furthermore, 70% of recruiters confirmed that due to companies' unwritten policy of not hiring women, particularly on-board ships, a low number of females gets selected for jobs. If there are any openings, they are mostly for cruise ship or on-shore jobs

Job Types

Females are mostly hired for two types of jobs: on cruise ships or on land, such as in finance, IT, and administration. However, the number of women hired in the cruise industry is increasing, but only for odd jobs such as hospitality management, reception, and cooking, where having a woman is necessary. Further, for core engineering jobs like mechanical, electrical etc. companies hire females. The reluctance of companies for hiring females for sea based jobs is clearly reflected during the responses.

- **Challenges Specific To Maritime Sector**

Although, no specific reason that recruiter could highlight as a challenges specific to hiring of women but some of their reservations were observed like the belief that ship environment such as rolling pitching is not good for females. Piracy / Hijacking which is again a challenge in seafaring may have adverse impact if it's female on-board. One more point related to not getting choice of food on ship has been also cited.

• **Challenges Specific To Female In Maritime Sector**

Various challenges that are inherent to the job in maritime sector, specifically for women as highlighted by the recruiters. Location of work is the biggest disadvantage in maritime sector. As the port is special economy zone (SEZ) notified area, all the operations take place is within the area. It is difficult for female to work in remote area especially after marriage and kids. Certain recruiters have tried to allocate women in night shifts, but due to administrative limitations, willingness of female employees and due to safety concerns it is not very successful and certain organizations have clearly put a ban on night duties for females. The biological cycle of a female leads to marriage and pregnancy within stipulated time frame, generally before 30 years of age. That is the time after her fresher period is over and mid-career starts. So having family and new born obligations have direct impact on mid-career management for companies as well as for female employees. The entire culture of a ship reflects masculine values. Uniforms, helmets, boots, and other critical life-saving equipment may not physically fit a female body. Basic medical facilities for females are also not available. Many times females are being bullied and harassed by superior and colleagues. Hence, safety and security is vital concern for recruiters in context with female seafarers..

• **Availability/Interest**

As per recruiters, females, in general, do not see a career in the maritime industry as a promising alternative after schooling. Females are less interested and less likely to participate in the sector because of its masculine image. Sometimes female manpower is available but not in accordance with the requirements. Accordingly, there is a scarcity of female candidates. The belief is exactly opposite to the reality as the female respondents have cited examples wherein they were not recruited due to their gender and

their promotional aspects also got hampered mostly due to discriminatory company policies.

•Occupational/ Sea Faring Culture

According to Recruiters, the seafaring culture is completely male dominated, and has been such for centuries. The existing male crew has difficulty accepting females, and the typical mind set of males provides rating and appraisal of seafarers based on gender rather than competence. Furthermore, multinational laws, particularly in Gulf countries, pose a significant challenge. Besides that, mid-term management and pregnancy are limitations for them to hire.

•Male Culture

As stated by recruiters, females generally do not get adequate support from their male superior or colleagues. Compare to male, females are given less opportunity to perform on ship as they perceive females as weak and not competent enough. The typical male mindset, that it is solely their world and they are the only rulers, leads to on board harassment to female. Females are being bullied not only on-board but also on social media for being chosen for the job. Although, the recruiter have shown their belief that females are mentally more strong than males and strong and a stable mind is very important for on-board / on ship. Further, if husband and wife both are in same profession it is easier for a female because the husband understands the peculiarities of the job.

Society and Indian Culture

As observed, many women are discouraged from working in the maritime industry because of Indian perceptions of the nature of women's work and a lack of female role models. Females are being discouraged from joining the marine industry due to traditional social responsibility of marriage, nurturing family, kids. As stated by recruiters in comparison to other countries, Indian females are found to be less courageous; this must be due to Indian society's mind-set. Acceptance has increased in some areas and cultural norms have changed, but India still has a long way to go. Long term voyages that is 8-9 months on a ship without having another female colleague is

highly unacceptable by family. Accordingly, there are limited women joining maritime sector or leaving in the middle of their career.

- **Gujarati Culture**

Despite the fact that Gujarat has the longest coast line in India, there is very low participation of Gujarati females in the maritime sector compare to other states. The reason cited by recruiters are varied like when it comes to food, the majority of Gujaratis are vegetarian there is a mixed crew on board, making it difficult for vegetarians who have fewer options. Furthermore, unlike other states, Gujaratis preferred to conduct business rather than travel by sea. In other states, females consider the marine industry as a career option after finishing their tenth or twelfth grades but this is not the case for Gujarati females.

- **Lack of Awareness**

- Despite the fact that the sea is the oldest mode of transportation, awareness of the sector is still low, particularly among women. Because shipping does not appear to be a part of our daily lives, very few people are aware of the lucrative career opportunities available in the maritime sector. Furthermore, schools and colleges take very few initiatives to help students learn about careers in the maritime field. The advertisement and promotion about the sector is also limited by companies and by the state and central government.

- **Performance Satisfaction**

The recruiters with whom female employees are working and when asked about their performance, the response was unanimous they have been either satisfied or highly satisfied. 100 percent positive feedback has received from recruiters. All the recruiters with whom female are working have shown their acceptance and affirmation for hiring females.

- **Quality of Females**

As stated by recruiters, life on ship could prove extremely challenging, especially to female seafarer, as it required lots of physical and mental strength. Days and months without being on land it is difficult to be on-board if one is not mentally strong. It has been found that, compare to male, females are mentally strong and emotionally strong.

The females are disciplined, hardworking, dedicated and with strong willpower. Accordingly, females brings balance on ship. Furthermore, females brings different perspective to problem solving.

5.3 Section-III Opportunities And Challenges Perceived By Existing Students And Alumni

(A) Opportunities And Challenges Faced By Existing Students

- **Age:** 94% belonged to the conventional age group of 18-25 years. In the maritime course offered by the various institutions, a student is eligible to take admission even after his 12th standard schooling. Pursuing the maritime course have completed the conventional course, cleared the basic eligibility criteria and have then enrolled in the niche course. Thus, the cohort group was reflected in the age group of 18-25 years. Only six per cent were in the age group of 26-35 years.
- **Gender:** 77% of males were enrolled in the maritime course. Only 23% of females were enrolled in the course. The maritime course is a niche course, which provides job opportunities in the sea-based and non-sea-based segments. The sea-based jobs involve long-distance travelling and remaining aloof from home, which is often looked upon with a stereotype as a non-preferred job for women. The social stigma of not allowing women to be away from the house for a long period plays a vital role in the low enrollment of female pupils in the course.
- **Educational Qualifications:** 94% of pupils completed the basic graduation degree and then enrolled in the maritime course. The primary reasons to enrol in the maritime course were to attain a niche skill, switch over or accept new career opportunities which provided a handsome initial salary with a faster rise in pay package and higher career progression. As per the Indian Education System, a graduation degree is a basic necessity and is often considered as minimum eligibility for the job aspirant. Self-drive and self-motivation only promotes learning, irrespective of age.
- **Type Of Course:** 15% pursued the course to attain the basic graduation degree. School-level education in any stream opened the gate for a Graduation Degree

in courses like General Purpose Rating, Bachelors in Maritime Studies. Graduation especially Bachelor in Technology is a must to pursue courses like Graduate Marine Engineering. Graduation in any field provided an opportunity to enter into Post-Graduate Diploma in Maritime Management, Masters in Maritime Management or Post-Graduate Diploma in Maritime Law. Bachelor's in Law is a must to enter into Masters in Law course specific to the Maritime Sector.

- **Semester Pursuing:** 84% were pursuing the fourth semester and nine students (seven per cent) in the eighth semester. A course of two years would have four semesters; three years would have six semesters and four years would have eight semesters. the survey has tried to approach the different students of last semester for understanding their perspective to pursue the course. 100% of students pursued full-time courses.
- **Stream Of School Education:** 38% of students who pursued science stream were enrolled for the maritime course, to excel in the niche skills for better economic prospects and job placements. 12th Science is compulsory if one wishes to pursue a Bachelor's in Technology (Marine Engineering) and Bachelor's in Science (Nautical Science). More commerce stream students diversified to the maritime course for better prospects.
- **Stream Of College Education:** 83 students completed the college from the commerce stream. The transition was noticed from the science to commerce stream when the students moved from the school level to the college level. Science is considered to the topmost streams, followed by Commerce and then Arts the lowermost. A transition is allowed from the topmost stream to the lowermost, but vice-versa is prohibited. College-level studies and specialization open different job opportunities for the students.
- **Educational Institute:** B.K. School of Business Management, Ahmedabad; Ganpat University (U. V. Patel College of Engineering), Mehsana and Gujarat Maritime University, Gandhinagar respectively. B.K. is the first-mover institute to start the maritime course, which was then followed by Ganpat University and

Gujarat Maritime University. Students preferred to enrol in B.K. School due to its brand-name and good placement opportunity. Gujarat Maritime University has recently started the course and hence the enrollment of students was less.

- **Course Enrollment:** 83% had enrolled in PGDM. PGDM is being offered by B.K. School and LLM and PGDM-Law are being offered by Gujarat Maritime University.
- **Specialization Selection:** 78% pursued Logistics and Shipping Management specialization. Logistics and Shipping Management spun a lot of on-shore and off-shore jobs and hence it was favoured by the students to gain specialized knowledge when they pursued the maritime course. Port Management course to offer job opportunities which were on-shore.
- **Course Duration:** 83% were enrolled in a two years course. students preferred to study in a two years full-time course.
- **Course Fees:** The fees charged by B.K. School is the lowest because it is a government department. Ganpat University and Gujarat Maritime University are private universities without any government support, so the fees charged by them are more than the government college. The fees are higher for those courses which are either lengthier or the type, of course, is technical.
- **Mode Of Awareness:** 34% gained awareness through friends. A friend encouraging his or her buddy to enrol in the course may be treated as a herding behaviour of the prospective pupil. Thus, the informal network plays a powerful role in attracting students to the maritime course.
- **Marine Background:** 76% of students had no marine background. The knowledge of marine background helps to easily explore and evaluate the opportunities beforehand. Thus, someone's experience in the marine field provides leverage to take the crucial decision to enrol in the course.
- **Job Location:** 39% of students preferred to opt for job locations within the country. Students who wished to perform jobs abroad were highly ambitious and aspired to quick growth, for which they were ready to forgo the comfort of house and family. Students, who wished to work within the country, believed in career

growth but not at the cost of leaving the motherland. At times personal commitment and family's pressure often acted as a hurdle to leave India for the job. Students, who preferred to live within the State and perform the job, were a type of homing bird, who may be easily satisfied with his or her career growth.

- **Job Preference:** 65% of respondents preferred Non-Sea Based Job. The reasons for the highest preference for Non-Sea Based jobs were it provided comfort; one can stay with the family the whole time, was not risky and did not involve any travelling. There are high incentives for sea-based jobs but were not preferred on a larger scale due to frequent long-distance travelling, involved a high level of accidental risk, detachment from family and friends, emotional and social breakdown and isolation.
- **Future Expectations And Growth In Non-Sea/Sea Based Jobs:** The dream companies were Gujarat Maritime Board, Adani Enterprises Ltd, Adani Ports and SEZ Ltd, Container Corporation of India, Reliance Logistics Group etc. 62% (51 students) expected a salary of Rs.3-5 lakh per year. 65% were aware that clearance of exams was a must for promotions. The percentage rise in willingness to appear for the exam may be attributed to the students who were not aware were also willing to appear for the exam, as their promotions and future growth were directly linked to it.
- **Inferential Statistics:** It is discussed in the table below.

Table 5- 3 Major Findings from Hypothesis Testing

Null Hypothesis	Test Administered	Statistical Result	Interpretation
There is no association between gender and preference for a job.	Fisher's Exact Test	Significant	There is an association between gender and preference for a job. Very few females preferred sea-based jobs. The sea-based jobs require good physical stamina, involves long-distance travelling, isolation from family etc, which may not be possible for women to undertake. There is a stereotype that women are not capable of pursuing blue-collared, hard toil jobs, they were meant for only soft-skills oriented jobs. At times the social stigma and family pressure often

Null Hypothesis	Test Administered	Statistical Result	Interpretation
			obstruct women from take-up such jobs, despite their desire for the same.
There is no association between preference for the job and expected pay package.	Fisher's Exact Test	Significant	There is an association between preference for the job and expected pay package. Working in sea-based jobs involves facing natural hardships, physical unrest, adaption to unfriendly working conditions etc so they expect higher salaries when compared to the non-sea based jobs.
There is no association between gender and the location of the job.	Chi-Square Test	Not-Significant	Both males and females have no mobility issues when it comes to accepting job offers abroad or within the country or the state. Such mobility would help the aspirant to accept lucrative offers and good career growth.
There is no association between awareness for future promotions and appearing for exams in sea-based jobs.	Fisher's Exact Test	Significant	There is an association between awareness for future promotions and appearing for exams. Those students who were aware that specific maritime exams, were a necessity for future promotions, wished to appear for the same. Those who were not aware did not wish to appear for the additional exams.
There is no association between awareness for future promotions and appearing for exams in non-sea based jobs.	Fisher's Exact Test	Significant	There is an association between awareness for future promotions and appearing for exams. Those students who were aware that specific maritime exams, were a necessity for future promotions, wished to appear for the same. Those who were not aware did not wish to appear for the additional exams. Some exceptional cases were not aware but still wished to appear for the exam, just because it opened the gate for promotions in the maritime sector.
There is no significant difference in the proportion of various	One-Way Chi-Square Test	Significant	The most favourable way for creating awareness in the prospective pupil was through the means of reference from friends. Thus, a chain of contacts between friends created awareness about the course.

Null Hypothesis	Test Administered	Statistical Result	Interpretation
sources of information.			
Variables are uncorrelated.	Factor Analysis	Significant	Identified factors: Specialized Prospects, Hefty Package and Stable Placements, Quick Career Growth, Choice Based International Job, Diversification and Entrepreneurship and Stable Location.
Male and females do not significantly differ in the perception of opportunity in non-sea based jobs.	Mann-Whitney U Test	Not Significant	Male and female were equally aware of the prospects that could be attained on pursuing the maritime course. Before entering the course the institute had explained to them in a prim and proper manner the benefits that may accrue to them if they pursued the niche maritime course. The aspirants might have gathered information on the prospects of the course from their informal sources, which made them more knowledgeable on the opportunities pursued from the course.
Variables are uncorrelated.	Factor Analysis	Significant	Identified Factors: Unstable Marine and External Environment, High Competition and No Courses, On Job Issues and Job Retardation.
Male and females do not significantly differ in the perception of challenges in non-sea based jobs.	Mann-Whitney U Test	Not Significant/ Significant	Male and females agree that unstable marine and external environment and high competition and no courses and on job issues were perceived to be the biggest challenges. They differed on the aspect of job retardation.

(Source: Researcher's Compilation)

- **Opportunities In Non-Sea-Based Jobs:** It is described in the table below.

Table 5- 4 Opportunities In Non-Sea-Based Jobs

Statements	%	Statements	%
Specialization in niche areas leads to a low level of competition.	24	High availability of jobs in the market within and outside the country.	24
Starting salary package better than other jobs.	16	Opportunity for placement in the government sector.	19

Statements	%	Statements	%
100 per cent Job placement.	21	Job stability due to niche area of specialization.	21
Job switching is quite easy.	22	Opportunity to work with multinational companies.	54
Expertise in the marine sector opens up vivid job opportunities.	40	As marine infrastructure is static at one place there are fewer transfers and no frequent changes in location.	18
Good scope for business after studying in maritime education.	33	Personal liking to shipping-related work.	51
Exposure to international trade.	32	Well defined career advancement and promotion channel.	22
Quick promotions can be availed.			13

(Source: Author's Own Compilation)

- **Opportunities In Sea-Based Jobs:** It is described in the table below.

Table 5- 5 Table: Opportunities In Sea-Based Jobs

Statements	Per Cent of Cases	Statements	Per Cent of Cases
Availability of various choices in sea-based jobs.	40	The ever-increasing demand for the maritime crew.	25
Opportunity for early placement.	33	Good starting salary package.	28
No tax on salary income.	28	Opportunity to work with the multinational crew.	63
Opportunity to command fleet of personnel.	28	Opportunity to explore the sea and encounter sea-related adventures.	63
Personal liking for long travelling and sea voyages.	73	Travel to foreign countries as a part of the job.	63
Faster promotions compared to other jobs.	58	Well defined promotion and career advancement prospects.	25

(Source: Author's Own Compilation)

- **Challenges in Non-Sea-Based Jobs:** It is described in the table below.

Table 5- 6 Challenges in Non-Sea-Based Jobs

Statements	Per Cent of Cases	Statements	Per Cent of Cases
Lack of job opportunities due to changing industry dynamics.	18	Less job placement if the particular segment of the industry faces slow-down.	18
No growth for promotions.	24	Market dependent sector leading to frequent layoffs and job instability.	13
Government regulations and support are not adequate.	13	Frequent changes in international trade norms/currency rates lead to stiff competition.	29
Less opportunity in the country compared to foreign nations.	16	Working from far off locations mostly away from urban areas.	11
Salary is lower compared to other jobs.	18	Gender Discrimination may be faced.	18
Work-Life Balance is difficult due to the nature of the job.	07	Lack of available courses in-country for promotion/specialization.	22
Time-consuming and High cost is to be incurred for up-gradation of skills.			13

(Source: Author's Own Compilation)

- **Challenges in Sea-Based Jobs:** It is described in the table below.

Table 5- 7 Challenges in Sea-Based Jobs

Statements	Per Cent of Cases	Statements	Per Cent of Cases
Separation from family for long duration due to long voyages in the sea.	56	Unsettled lifestyle due to unavailability at one place and away from home for long durations.	36
Lack of social life as mostly away from home.	10	Feel isolated as away from family (friends).	49
Often feels like Depression.	28	Difficulty in understanding multi-language and ethnicity.	18
Discrimination on basis of rank.	31	Discrimination on basis of sex.	44
Discrimination on basis of nation/ethnicity.	36	Discrimination on basis of language.	31
Bullying by colleagues and seniors.	59	Rise in maritime piracy leading to threat for crew including death.	44

Statements	Per Cent of Cases	Statements	Per Cent of Cases
Stringent Maritime Laws make crew accountable for unavoidable circumstances.	23	Environment compliance-related criminalization of crew members like oil spillage, destruction of sea life, etc.	64
Reduced shore leaves lead to less time to relax and rejuvenate.	26	Difficult to prove competency.	41
Fear of high accident rates.	23	Fatigue due to long working hours at the ship.	39
Extended working hours due to unavoidable situations like change in sea weather, cyclones, colleague sick, etc.	31	Different climatic conditions make the body frequently not adaptable to various climate challenges.	46
Continuous noise and vibration due to vessels leading to specific body-related stress.	54	Limited moving space as restricted to vessels leads to physical discomfort for long durations.	41
Exercise cannot be carried out due to limitation of available equipment, space and time causing health deterioration.	21	Shift wise working results in disturbance in the sleep cycle.	59
Sleeping and eating disorders.	23	Fear of Communicable Diseases.	49
Often deprived of sleep.	28	Causes Sea Sickness in the body.	39

(Source: Author's Own Compilation)

(B) Opportunities and Challenges faced by Alumni

- **Age:** 51% belonged to the age group of 26-35 years. Respondents have experienced alumni, who were passionate to pursue their career post-completion of conventional degree courses.
- **Gender:** 83% of males were working in the maritime sector. Only 17% of female respondents were working in the niche maritime sector. Very fewer number women enrol for such courses. After completion of the course, only a handful of them initiates their career in the maritime sector.
- **Educational Qualification:** 59% were undergraduate and 41% completed post-graduate. Students were easily absorbed in the maritime sector after completing either graduation or post-graduation level studies. Several males pursuing the niche course were more when compared to females.

- **Type of Course:** 59% of respondents enrolled for a graduate degree programme. Maritime courses run by different institute awards either degree or diploma to the aspirants. Students enrolled in the maritime course for better prospects.
- **Institute Details:** 41% pursued maritime sector studies from B.K. School of Business Management. 56% had studied at Ganpat University. B.K. is one of the leading and oldest institutes and Ganpat University runs many different types of maritime courses, so the majority of the respondents were from these premier institutes.
- **Course Enrollment:** 56% had completed Bachelors in Technology programme, run by Ganpat University. 41% had accomplished Post-Graduate Diploma in Maritime Management (PGDM), run by B.K. School of Business Management.
- **Specialization Accomplished:** 32% had completed a specialization in Logistics and Shipping Management. 55% had pursued Marine Engineering. B.K. School offers specialization in Port-Management and Logistics and Shipping Management in its PGDM course. Ganpat University offers Marine Engineering under specialization in B.Tech. Maritime Law is the specialization offered by Gujarat Maritime University under the PGDM-Law programme.
- **Course Duration:** 56% had completed a four years course; 41% had pursued two years courses. The PGDM-Law programme of Gujarat Maritime University is a one-year duration course. The PGDM course of B.K. School is of two years and four years B. Tech course is run by Ganpat University.
- **Year of Passing:** 29% of alumni had passed recently in the year 2018. The responses from the senior-most and junior-most alumni were taken. 52 males had an average experience of 4.73 years with an SD of 3.50 years. 11 females had a meaningful experience of 3.73 years with an SD of 2.10 years. Male has more experience than females may because they started quite early to perform the job.
- **Mode of Placement:** 51% of alumni availed their first job through campus placements. Students often considered campus placements as a matter of pride in fetching their first job.
- **Clearance of Specialized Exam:** 97% of the respondents did not appear for any specialized exams. If the course pursued was in the marine sector then there was no

necessity for appearing for the specialized exams. Maritime course in itself is a niche and specialized course targeted towards skill-building in the marine sector.

- **First Company and First Designation:** The majority 38% of respondents started their career with Adani Hazira Port Pvt Ltd. the first designation in the first company were quite different across all the respondents. A designation like Assistant, Customer Care Executive, Executive, Import/Export Executive, Junior Executive, Management Trainee, Sales Executive, Senior Executive, Trainee, Research Executive etc were common.
- **Starting Salary:** 54% received starting salary of Rs.2-Rs.3 lakh per annum. The starting salary was fair enough to kick-start the career.
- **Rating of Initial Salary:** 61% considered their initial salary to be good. The specific skill-set about the niche maritime sector helped the respondents to fetch jobs with good starting salaries.
- **Current Organization:** Respondents have continued with the same company, with which they had started their career. By far and large, sticking to the same company indicated that either respondent was quite satisfied working with the company or they might have not received an appropriate chance to make a shift.
- **Type of Organization:** 89% of respondents were working in Private and 11% were working in Government sectors respectively. Respondents easily got a chance in the private sector based on merit and skills.
- **Job Location:** 98% worked within Gujarat. There are ample job opportunities because Gujarat is surrounded by sea and there are many companies that are involved in domestic or international trade via sea route. They also considered it as a cosy environment of their home state. Respondents preferring to work abroad were far and few.
- **Present Designation:** Respondents were working as Assistant, Business Executive, General Manager, Junior Executive, Key Accountant, Manager, Marine Engineer, Operations Executive, Project Executive, Senior Executive, Senior Officer and Trainee. Based on the experience the respondents climbed the career ladder.
- **Current Yearly Gross Salary:** 57% availed salary in the range of Rs.2,00,000 to Rs.4,00,000. The average salary of the respondents is Rs.5,34,640. The SD in salary is

Rs.2,57,219. Based on the educational qualifications, designation and experience the difference in salary is noted to a large extent.

- **Current Job Sector:** 59% were currently working in Non-Sea Based Jobs and 41% were working in Sea-Based Jobs. Non-Sea Based Jobs are relatively easy and comfortable, so the majority of the respondents prefer to work for such jobs.
- **Inferential Statistics:** It is discussed in the table below.

Table 5- 8 Major Findings from Hypothesis Testing

Null Hypothesis	Test Administered	Statistical Result	Interpretation
There is no association between gender and the type of course pursued.	Fisher's Exact Test	Significant	There is an association between gender and the type of course pursued. Less number of females were enrolling in the niche maritime stream. The reason for the low enrollment of females would be either due to lack of awareness or perception of tough working conditions in sea-based jobs or family might not support the idea of such unconventional job wherein the female might have to be away from home if they undertake such sea-based jobs.
There is no association between gender and initial salary.	Fisher's Exact Test	Not-Significant	There is a dearth of manpower in this niche sector. Those people who have a specific skill set equipped for the maritime sector would stand a good chance in terms of quick placements and good pay. This would be a primary reason for no discrimination in salary.
There is no association between gender and sector of job.	Fisher's Exact Test	Significant	There is an association between gender and sector of job. As the survey pertains to the alumni, those people have been working in the respective sector for many years and hence have developed the liking for the same. The females were very clear to pursue a course in the maritime sector and also perform their duty in the same. Those women had no apprehensions about working in the sea-based maritime sector and that was the reason that even after the average experience they were working in the same sector. Either passion or lucrative pay did not allow them to make a shift.

Null Hypothesis	Test Administered	Statistical Result	Interpretation
There is no significant difference in the proportion of various sources of placements.	One Way Chi-Square Test	Significant	The majority of the alumni were placed in their first job through campus placements. The educational institutes are not only into providing education and imparting skills but they are also taking the responsibility of their students to place them. Higher the campus placements, higher would be the enrollment of students in such colleges.
Male and females do not significantly differ in the perception of opportunity in non-sea based jobs.	Mann-Whitney U Test	Not-Significant/Significant	Male and females feel that there are job-related opportunities in the non-sea based maritime sector. They also agree with the fact that it suits their education and personality point of view. Male and females differ concerning HR Issues.
Male and females do not significantly differ in the perception of challenges in non-sea based jobs.	Mann-Whitney U Test	Not-Significant/Significant	Concerning other factors such as Location Constraints, Job Environment and Family-Related Constraints males and females also have the same opinion. Male and females have different opinions on job-related and HR interventions challenges.
Male and females do not significantly differ in the perception of opportunity in sea-based jobs.	Mann-Whitney U Test	Not-Significant	It was their passion, that prompted them to pursue a maritime course. The same passion motivated them to take-up the employment in the maritime sector and remained loyal to the same. Thus, gender difference did not play a role in the perception of opportunities in sea-based jobs.
Male and females do not significantly differ in the perception of challenges in	Mann-Whitney U Test	Not-Significant	Male and female alumni might be facing some challenges but the passion of their career does not allow them to relatively discriminate the challenges based on their gender. They would have objectively accepted those challenges before enrolling in sea-based jobs.

Null Hypothesis	Test Administered	Statistical Result	Interpretation
sea-based jobs.			

(Source: Author's own Compilation)

5.3.1 Findings From The Survey Of Existing Students And Alumni

Table 5- 9 Institutional Experience And Findings:

Total Coastline	Total Trade	Maritime Institutes approved by D.G. Shipping	
		In India	In Gujarat
Gujarat has the longest coastline in India, stretching 1600 kilometres which is approximately 23% of the country's total mainland coastline.	Around 95% of India's trading by volume and 70% by value is done through maritime transport. Gujarat constituting for 40% of total Indian maritime trade.	143	3

In comparison to the available coastline, volume of trade and industry based, the number of institutes approved by Directorate General Shipping (DGS) is just 2 percent, which is alarmingly low. The Directorate General Shipping (DGS) is provided the institutes for maritime courses. As mentioned in literature review there are 143 maritime institutes in total, with only three of them are located in Gujarat. There are only three institutes that offer maritime courses and having female students studying the same.

- a. B.K. School of Business Management and Professional Studies (2006)
- b. Gujarat Maritime University
- c. Ganpat University (U. V. Patel College of Engineering)

- (i) B.K School of Business Management and Gujarat Maritime University offers only courses after graduation i.e. PGDM, MBA, LLM, etc. which are shore-based courses; there are no courses available after the 10th or 12th grades. There aren't any courses available in Gujarat at under graduation level.
- (ii) Further, only one university that offers maritime sea-based courses. Although, it may be noted that the available courses are only on the engine side. Marine courses are divided into two side, one is engine side and the other is deck side. Engine side is comprised of

electrical engineer, mechanical engineer, marine engineer etc. and deck side is comprised of navigational and administrative.

- (iii) Compare to other courses, marine courses fee structures is higher than other similar courses. Additionally, specialisation necessitates adequate infrastructure or access to services, both of which are expensive. Further, these institutes are located in Gandhinagar, Ahmedabad, and Mehsana, which are remote from the rest of Gujarat. Accordingly, students have to bear additional cost of lodging and food which leads to high overall course cost that is out of reach for the majority of the population.
- (iv) According to existing only one university for marine courses data collected from their start 2009 to 2019, there were a total of 193 students enrolled for the courses, with only one female student passed out till date. Accordingly, there is further more scope of research in other states. Although for shore courses, ratio of female is satisfactory.
- (v) It has been observed that there is 100% placement, with 98 percent of alumni placed in Gujarat and only two percent placed outside the state. Accordingly, it is possible to assert that adequate opportunities exist within the state. Although, generally locations are far from the city, nearer to coastal area. One has to travel by distance or has to stay away from home.

A: Opportunities In Maritime Sector Specific To Students

(i) Vivid Job Availability:

As per the literature review on **Job role in maritime Sector**, there is an ocean of opportunity and requirement of qualified professionals from across all fields in maritime sector i.e. for sea based jobs; Chief Officer, Chief Engineer, Second Officer, Second Engineer, Engine Cadet, etc. and for non-sea based jobs; Port Officer, Marine Engineer, Marine Administrator, etc. Further, as mentioned in table 1.1 of literature review, there is a massive shortage predicted, so the demand for skilled and certified crew is high and increasing. The same has been agreed by existing students and alumni.

(ii) High Salary Compare To Other Jobs:

Because the profession necessitates specialised and expertise resources and there is a scarcity of both; starting salary is higher in compare to other job. Based on the question asked through questionnaire to existing students and alumni, the mean values were above three, which indicated an agreement with the statements. The SD less than one, which indicated that there

was a strong consensus amongst the respondents. Salary ranges from 70,000/- to 15, 00,000/- per month for sea-based jobs.

(iii) Career Opportunity:

The opportunities perceived/ observed by the existing students. At the start of career itself there are opportunities to work with multinational companies and travel to foreign location. The perceived idea of students is further strengthened by literature review conducted in thesis and statistics of job availability and future requirements. Further, stream like promotion channels and hierarchy ensures a seafarer to plan career accordingly. The data is backed by the statistics i.e. BIMCO 2015 and 2021 report on huge demand of seafarers and as observed in literature review regarding vivid job opportunity and hierarchy in seafarer stream. Although, not observed in high frequency by the alumni.

B: Challenges In Maritime Sector Specific To Students

Based on the questions asked, it has come to notice that below mentioned challenges are being faced. The same has been justified with literature review and data analysis.

(i) In Sea Based Job:

The challenges perceived/observed by the students in sea based. Due to nature of job, long separation from family, unsettled lifestyle, peculiar ship related stress and physical fatigue, due to multicultural, multinational crew on same vessel discrimination based on language, nation, sex and ethnicity. Further, stringent environment laws, piracy and adverse weather condition adds further challenges to the seafarers. The data is backed by the literature review as highlighted in table and has come out clearly that the perception is reality in the job scenario. Although, the experience of alumni for challenges like, separation from family, long working hours, depression and fatigue is different as per their individual experience and the consistency is also high.

(ii) In Non-Sea-Based Job:

(iii) The challenges perceived/observed by students in non-sea based are further specific to the core competency and dynamic nature of job, its volatility due to demand and supply in market and hence sudden surge or slack in job market. Further, job within country are limited and outside is more and courses for specialisation is more in foreign countries than in India which is costly. The data is backed by the details of limited institutes and specialisation courses as observed in literature review.

Additional Data Observed From The Papers Published

Majorly, females are coming from the non-maritime sector background and very few females have parents/some relatives in maritime sector, which shows a positive trend that non background sector students are also joining. Lack of awareness to the general public about the course has been highlighted as the single major reason for lower number of females in the institute.

Most of the female students highlighted that they wanted to do something different and to break traditional mind-set of girls cannot join as seafarer. Secondly, personal liking plus high salary and good career opportunity were the reasons.

As perceived by female students, that the maritime sector is strictly male dominated and being a single female on the ship it may be difficult to operate. The female students are aware of the fact that they might have to serve on board at ship as alone female seafarer amongst the group of male crew members and they know that they have to deal with this problem where they may feel left out, still they said they are determined and courageous enough to choose this field. As stated there are no challenges they can't overcome and they are ready to sail immediately after completion of course.

Common Observation For All Three Parts Of Analysis

A. Awareness About Maritime Sector

As highlighted by recruiters that the less number of females in the sector is due to less awareness about the sector amongst the people and those who knows about the sector are mostly have gained knowledge from close ones. Existing students and female sea farers have confirmed that they come know about the field from family, friends or relatives. Further, it has been observed in the findings of female working in non-sea-based jobs that that are no specific reason that can be highlighted as less females in the sector but then the lack of awareness.

B. Less Female Ratio In The Institutes As Well As In Sea Based And Non-Sea Based Jobs

It has been observed in all the parts of researches that there are fewer number of females in the sector, it may be because the available number of females is less in the supply side itself. As there are less females are enrolling for the maritime based courses, at the

demanding side there are lesser females available. Further, it has been find out that the Government policies and organizational policies are not favouring females in sea based jobs. Moreover, the typical mind-set of society is also one of the reason for less female ratio in this sector.

C. Male Subordinate Behaviour

The maritime sector has been historically male dominated and has been highlighted worldwide by various researchers. The acceptance of female in this sector is still very low. Discrimination on the basis of gender, rank, nationality, etc. has come out very commonly in all the three part of the analysis.

5.4 Policy Level Suggestions

5.4.1 Policy Level Suggestion For Supply Side:

Despite the fact that maritime industry offers variety career opportunities, women are highly underrepresented in this industry. As maritime industry has been historically dominated by male. It is important to bring some policy level changes in order to support and improve number of women in maritime

At supply side to increase the number of female students in maritime course following policy level recommendation is suggested:

Increase In Awareness About The Sector And Available Job Opportunities:

Awareness through government intervention: The knowledge about the sector in country is very low and negligible amongst the female population and in order to increase the same the various initiatives that are suggested:

Maritime Portal Development: The portal is recommended to be developed by government comprise of web based as well as mobile application based,the portal should cover the following aspects:

- Various available courses at high school level , Higher Secondary level, Under graduate level, post graduate level to be incorporated in the app including college/institute details, course fees details, mode of joining, examination details.
- Scholarship details for Female students and reservation of seats in the country. Further there are reservation seats and scholar ship at global level for females that should also be placed on the portal.

- Opportunities in job sector after doing above mentioned courses respectively along with recent placement statistics and salaries offered.
- Link of Job vacancies to be placed on the portal also mandatorily for all RPSL (Recruitment Agencies) and recruiters in India along with their own channel of recruitment.
- To increase awareness amongst the students a National level Maritime quiz competition on the National Maritime Day (05 April every year) or The International Day for Women in Maritime (18th May every year) to be conducted for 8-10 class and 10-12 class with prizes at school level for male and female students separately, the quiz exam and maritime knowledge like history of world and Indian Maritime sector, Existing Trade and employment opportunity etc. can also be kept on portal or app. The initiative will help students and parents in gaining more knowledge about the sector.

Broad Casting:

- National level awareness campaign through advertisement on national new channel and special coverage of complete maritime opportunities on National Maritime Day (05 April) and World Maritime Day (Last Thursday of September every year).
- Indian Female seafarers to be presented as role models through Short films and achievements to be highlighted including available scholarship for joining as a female.
- Social media interactive pages for aspiring students. That shall also be used as a platform for queries and resolutions.

Institutional Level Awareness:

- Campus and institute brochures should be designed to emphasize female participation, female-friendly training equipment, and their numbers on front page or in highlights of institute achievements.
- Female hostel facilities should be provided by Institutes and placement cell to focus on female students including publishing of placement reports genderwise.
- Institutes to take more intake of female faculties. Government should make it compulsory for institutes to hire 30 percent of female faculties. The same will have a positive impact on the existing female students and prospective female students joining the institute.
- D.G.Shipping should make it mandatory for maritime institutes to conduct at least twenty seminars in ten districts every year covering at secondary and higher secondary schools,

50 percent of which should have girls school to keep their licence active. Campaigning should include knowledge sharing and information about sector and prospective employment opportunities at high school and higher secondary level including awareness amongst parents through inclusion of parents in seminars.

- Institutes should also include female role model like existing seafarers to do physical campaign and share their knowledge and experience.

Increase In Numbers Of Institutes: Considering the demand as per Sagarmala Project and Maritime India Vision 2030 there will be oceans of job opportunities available which increase the number at supply side and also female participation. However, Gujarat only has three D.G.Shipping approved institutes and two Universities conducting maritime course. Thus, it is vital to increase the numbers of the institutes. Followings are the suggestions to increase their numbers.

- More institutes in the state especially on the coastal belt wherein the importance and knowledge about port can be converted into the education and employment opportunity.
- According to the Apprentice Act of 1961, marine students should also benefit from this act. Furthermore, ITI should include one-year and two-year courses, and they should be able to work as apprentices on board ships.
- Industrial training Institutes (ITI's) have to start female oriented training for handling of machineries in port sector in order to make the adequate skilled women available for jobs. The place of ITI having marine courses should be in coastal regions as the awareness about the opportunity and jobs are readily available.
- Indian Maritime University should be established in Gujarat as there is currently no International Maritime University available.

5.4.3 Policy Level Suggestions For Demand Side:

Policy Suggestions At Global Level: In alignment to agenda of UNSDG 2030 of gender equality the regulatory bodies like UN, IMO, ILO etc should focus on global level policy and guidelines changes like:

- **Female Reservation:** To start with minimum 10 percent crew or at least two females on board should be policy guidelines for shipping Industries and only in case of non-availability

of female, waiver should be given. The policy should be implemented globally. That way by year 2030 there will be rise in female employment from below two percent to ten percent.

- **Ship Structure And Design:** The ship design and equipment specification has to be made gender neutral (female friendly) like separate room for female, equipment and personal wearables like shoes, life jacket, helmet etc.to be made as per specification of both genders.
- **Proper Implementation Of Policies:** Gender neutral and Harassment policies should be applied properly. For harassment committees, female panellist should be compulsory. The mind-set of the policy maker or organization should be changed and has to be non-discriminatory.
- **Recruitment Panel:** The recruitment panel of the organization should include female in their panel and any organisation not hiring or not interviewing females should be subjected to penalties.

Policy Suggestions At Indian Level: Indians are preferred by most multinational companies across worldwide fleet of ships and India now rank third in the list of the large seafarers supplying nation to the world maritime industry. Further as per Government of India flag ship project "Maritime India Vision 2030" and "Sagarmala project", huge employment generation is going to be there and sector is full of opportunities. Maritime Vision 2030 also has Gender neutral agenda with increase in number of females in maritime sector, thus, following are the suggestions that can be implemented at national level in order to meet the demand side and also the inclusion of females.

- **Recruitment Portal:** The recruitment agencies should have mandatory recruitment portal wherein all the details of the company requirement and available seafarers can be jointly list. Companies can hire females through the portal.
- **Hiring Apprentice:** In order to increase female participation, it should be made mandatory to have fresher females on board at ship as apprentices. The advantages are that companies will have to bear very low cost as they are apprentices, and their stipend can be reimbursed under the act by government. Furthermore, because there is companion females on board, the problem of isolation and loneliness can be addressed positively.

- **Female Crew:** For all in-land vessels having more than 10 crew members it should be mandatory to have at least 2 female on board, only in case of non-availability of females than the other option should be given to recruiters.
- **Maritime India Vision:** Wherein the sector is getting massive growth to various initiatives and infrastructure development. Accordingly, there will be plenty of job opportunities. Government should make 33 percent reservation for female like in other government sector.
- **Shore Based Opportunities:** Shore based jobs to be clubbed with sea based jobs as a complete package to the seafarer females i.e. after 5 years or 10 years of sea based job period females should have opportunity to join shore based jobs to balance Mid-term career and also allow them to deliver their responsibilities at home.
- **Safety At Shore:** Adequate policies for females working on port and specific guidelines for night shifts to provide a secure environment like bus or cab facilities from port to city or home, 24 hours CCTV monitoring, helpline numbers, separate rest rooms and crèche facilities.

5.5 Conclusion

The participation of women in the sector is alarmingly low and even after continuous effort by world maritime bodies there is no significant improvement in the numbers in last three decades. The situation in developing countries like India is even more difficult with number of women in sector below one percent. Based on the literature the research gap was identified which shows that no specific studies at Gujarat level had been conducted and no data is available for further studies and the same needs immediate attention. A review of theories shows that the proposed study could be based on the premises of The Feminist Theory which provides all the base variables of on-the-job discrimination towards women at workplace. Gujarat which has the largest coastline of 1,600 Kilometers handles almost 70% cargo of the country and spins numerous on shore and offshore jobs for large number of people. An empirical and qualitative research of women employability in maritime sector of Gujarat highlights the issues faced by women in maritime sector, policy initiatives that could be taken to boost women employability in maritime sector and developing courses which would impart skill and make the workforce ready for immediate absorption in maritime sector.

The outcome of the survey and literature review highly supports various gender specific issues in seafaring career. Firstly, the career opportunities are vivid in nature from engineering to nautical, administration to entertainment.

Secondly employment worldwide and in India is very high since the supply is limited and demand is very high. Further, the quality of training in India is world class and that is why it ranks third worldwide in supply of officers to world maritime fleet and lastly there is no difference in the admission for training based on gender and training is provided equally to all irrespective of gender which is very clear from survey.

Thus, there lies ample opportunity for the females to join the seafaring as an attractive and highly paid job which is presently dominated by males. Further as per the outcome of survey most of the female students highlighted that the awareness about the sector is not there to the general public and the college or at government level very limited advertisement or publicity is being done.

The female students are aware of the challenges that they might face but most of them have responded that they are ready to challenge the present set up and want to become role models for other and that is a very positive trend.

Finally, it can be concluded that the opportunities are immense in the sector for females, certain government support in terms of awareness, female friendly policies and infrastructure like increase in number of maritime training institutes will increase the supply and will help India achieve further better ranking and gender balanced seafarers worldwide.

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Annexure-I

Questionnaire to study the Challenges faced by Women Working in Maritime Sector General Section

1. Name (Optional) _____
2. Location _____
3. Age (in years)
 - Below or Equal to 30 years
 - 30 years and less than 40 years
 - 40 years and less than 50 years
 - 50 years and less than 60 years
4. Educational Qualification
Below Graduation _____ Graduate _____ Post-Graduate _____
5. Stream of Education
Science _____ Commerce _____ Arts _____ Others (Please Specify) _____
6. Did you pursue any maritime course?
Yes _____ No _____ If yes (Please Specify) _____
7. Marital Status
Unmarried _____ Married _____ Separated _____
8. Number of Children (Optional) _____
9. In which organization are you currently working? (Please specify the full name of the organization) _____
10. You are working in Organization as?
 - Permanent
 - Contractual
 - Outsource
 - Others
11. At which level you are working in the organization? (Tick only one)
Entry Level _____ Middle Level _____ Senior Level _____
12. Since last one year in which department you are working? (Tick as applicable)
Finance _____ Accounts _____ Taxation _____ Human Resource _____
Others _____ (please specify the full name of the department)
13. What is your total working experience in maritime sector? _____ (in years)
14. What is your total experience in current Organisation? _____ (in years)

15. What is your present annual gross salary?

Less than Rs.3,00,000 _____ Rs.3,00,001-Rs.5,00,000 _____ Rs.5,00,001-
Rs.7,00,000 _____ Above Rs.7,00,000 _____

Kindly rate your opinion on the following challenges faced by you with respect to your working in the maritime sector (5: Strongly Agree, 1: Strongly Disagree)

1. Work-Life Balance

Sr. No.	Statement	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	I get sufficient time for my leisure activities.					
2	I am able to finish work within the working hours, so there is no need to work overtime.					
3	I get enough of time to spend with my family and friends.					
4	The social benefits that the company provides me are important to me.					
5	I am currently able to maintain a balance between the time I spend at work and non-work activities.					
6	My current schedule offers flexibility at work.					
7	I am able to execute my job without getting burnt out.					

2. Training Discrimination

Sr. No.	Statement	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	I have experienced that female employees are more likely to be excluded from training programmes.					

2	Equal time and resources are allotted for the development of both males and female employees in my organization.					
3	In my organization, female managers are paid less as compared to their male counterparts.					
4	Men and women in the same roles at our organization have different wages and titles.					
3. Pay and Promotion						
Sr. No.	Statement	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	Female employees have a harder time finding jobs than male employees.					
2	The wages of Female employees' are increasing at a slower rate than male employees'.					
3	Career development programs for female employees are lacking in my organization.					
4	Performance assessment system followed in my organization is unfavourable for female employees.					
5	Male employees are more likely to be hired for core (professional) jobs than female employees.					
6	It is harder for female employees to move to departments that have more chances of advancement.					
4. Leave Policies						

Sr. No.	Statement	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	My maternity leave was long enough to take care of my child.					
2	Because I took maternity leave, I was denied promotion prospects at work.					
3.	I was able to take the right amount of maternity leave for me.					

5. Career Development

Sr. No.	Statement	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	At our organisation, female managers/supervisors typically are promoted up to a certain level and then they are stopped.					
2	I believe our firm is committed to removing obstacles that restrict women from realising their full potential.					
3	Men are promoted faster than women in my organization.					
4	Men are more likely than women to be promoted in this organization.					

6. Work Place Bullying (1: Never, 2: Rarely 3: Monthly 4:Weekly 5:Daily)

Sr. No	Statement	Never	Rarely	Monthly	Weekly	Daily
1	Sometimes my assignments are being shifted to my male counterpart without my knowledge or consent.					
2	My work is undervalued.					

3	I am being assigned work that is below my degree of expertise.					
4	My work is being constantly monitored without justified reasons.					
5	I am threatened in both ways verbally and nonverbally by my male colleague.					
6	My male colleagues make inappropriate jokes/remarks about me.					
7	Information's are not shared or not given in time that affects my performance and professional life.					
8	Many times I am excluded from workgroup activities.					
9	Many times I am denied for leave request, training or promotion without giving a justified reason.					
10	Sometimes I am given impossible deadline.					
11	My colleagues at time spread false rumours against my work and behaviour.					
12	Offensive comments/remarks concerning my personal or private life are repeatedly made.					
13	Often I get signals to resign.					
14	Repeated reminders are given to me for similar mistakes again and again.					
15	Often my Opinions are neglected.					

16	I am compelled to attend additional meetings and training sessions unlike my male counterparts.					
17	My superiors use disciplinary/competence procedure to threaten me.					
7. Turnover Intentions (5: Strongly Agree to 1: Strongly Disagree)						
Sr. No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I often think of leaving the organization.					
2	It's extremely likely that I'll start looking for a new employment next year.					
3	I don't think I'll stay with this company for the rest of my career.					
4	If I may chosen again, I will choose to work for the current organization.*					
5	I often look to see if such positions in other firms are open.					

8. Job Peculiarities

Sr. No.	Statement	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	Ports job location are at far off places and poses difficulty as a female in commuting.					
2	My organization works as per shifts including night shifts.					
3	I also get night shifts.					
4	Job related to Maritime, females are generally not preferred.					
5	Mostly the percentage of male is much higher in Maritime sector than female.					

Annexure-II

Questionnaire To Study the Challenges Faced by Women Seafarers

1. Name (Optional)_____
2. Age:
 - 30 years old and below
 - 31 years and less than 40 years
 - 41 years and less than 50 years
 - 51 years and less than 60 years
3. Marital status:
 - Unmarried
 - Married
 - Single Parent
4. Number of children (If applicable):
5. Did your family support you to undergo a maritime course? Describe in detail.
6. While pursuing your maritime course, did you face any academic challenges? If yes, then please describe the same in detail
7. Was the course that you pursued, provided the necessary skills relevant for the job? Narrate your experience in detail.
8. During recruitment process, what kind of challenges did you face? Explain them in detail.
9. What/who motivated you to pursue a sea-based career?
10. What difference you find in Sea based job than other jobs?
11. Is your current salary at par with the male colleagues who are doing the same work like you? If no, explain the reasons.
12. What are the specific professional level challenges that you experience?
13. What is your experience on board?
14. Does any other woman accompany you on the board, when you are sailing?
15. How is the behavior of your male colleagues when you are with them during the sailing period or on board?
16. Do you fear from any of the male colleagues when you are on the voyage? If yes, then which things causes fear, describe in detail
17. Have you ever experienced any discrimination due to your gender on board?
18. What are the specific personal level challenges that you experience about your sailing job?
19. How do you manage your personal life when you are on voyage (specially the physical problems)?
20. How difficult is it to maintain work-life balance when you are on a voyage?
21. How do you emotionally feel when you are on the voyage?
22. Does your family insist that you must leave the sea-based job?
23. Do you want to switch-over to the non-sea-based job? If yes, describe the reasons.
24. Would you like share any other experience or any specific information that is noteworthy?
25. Did you see any changes in last 10 years regarding the women joining the Maritime courses?
26. Do you believe that in the last 10 years, the maritime industry is hiring more women?
27. What kind of women friendly policies in maritime sector are expected by you?

Annexure-III

Questionnaire To Study the Perception of Recruiters Towards Prospective Female Employees

1. Name of the Organization. (Optional)_____
2. For recruitment on a single post, how many candidates do you short-list?
3. What is general ratio of male and female candidates whom you shortlist for the interview?
4. Does your interview panel mostly have female panellist?
5. Does your organisation have gender-neutral policies?
6. Does your organisation conduct any specific training for the woman?
7. Do you have any specific jobs that only men can do? Does any female ever try to apply for that job? What will be your call/reaction if any female apply?
8. Is there any specific job/ post you have where no females can apply?
9. How many females in your organisation is working in a sea-based job?
10. How many females in your organisation is working in non-sea-based jobs?
11. What are the barriers from your perspective in employing Women Seafarers/ women in the Maritime sector?
12. Are there adequate women available in Industry/Training Institutes for the recruiters?

13. Did you see any changes in the entry and contribution of women in last 10 Years?
14. Are there any government policies or your organisation that makes it mandatory for you to hire women employees?
15. Given an opportunity will you hire more female employees to have a balanced organisation?
16. Any specific incidence you would like to recall related to the hiring of the female employee or dealing with any problem?
17. Are you satisfied with the performance of the women whom you recruited?
18. Which are the positive qualities that you feel a woman has, because of which she must be recruited?
19. Have you ever felt that the decision to recruit to women in the organization was a bad-one? If yes, why?
20. According to you which are the biggest hurdles in recruiting women in your organization?
21. What is your opinion regarding the present low strength of women in the maritime sector?

Annexure-IV

Questionnaire To Study the Perception of Opportunities and Challenges in Maritime Sector of Final Year Students

1. Name: _____
2. Age (in years): 18-25 26-35
3. Gender: Male Female Transgender
4. Educational Qualification: Under Graduate Graduate Others _____
5. Type of Course: Graduate Degree Post-Graduate Degree Post-Graduate Diploma Others _____
6. In which semester/trimester are you currently studying? 1st 2nd 3rd 4th 5th 6th 7th 8th Other _____
7. Nature of the Course: Full-Time Part-Time
8. Stream of School Education: Science Commerce Arts Others _____
9. Stream of College Education: Science Commerce Arts Others _____
10. Name of the Institute (Tick only one):
B.K. School
Ganpat University
Gujarat Maritimes University
Other _____
11. Name of the Course Enrolled in (Tick only one) (Please write full name of the course):
Bachelors in Technology (B. Tech)
Graduate Marine Engineering (GME)
Post-Graduate Diploma in Maritime Management (PGDM)
Master in Law (LLM)
Post-Graduate Diploma in Maritime Law (PGDM-Law)
Others _____
12. Which specialization are you pursuing?
Port Management
Logistics and Shipping Management
Marine Engineering
Maritime Law
Others _____
13. Duration of course you are enrolled in? 1 Year 2 Years 4 Years Others

14. Fees charged by the Institute per year (in Rs.)
15. How did you come to know about this course? (Tick as applicable)
- Through campus visit
- Through college website
- From academic person
- Advertisements in newspaper
- Advertisements on hoardings
- Via friends
- Via relatives
- Any Other mode _____
16. Do you have any marine background? Parents Relatives Spouse Siblings
Not-Applicable
17. Where do you wish to do the job? Within State Within Country Abroad
18. Where would you prefer to work after completion of the course? Non-Sea Based Job Sea-Based Job
- ✓ *If you have ticked Non-Sea Based Job, then go to Section-I and*
- ✓ *If you have ticked Based Job, then go to Section-II*

SECTION-I (PREFERENCE FOR NON-SEA BASED JOBS)

19. Opportunities perceived by you in Non- Sea Based Job

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	Specialization in niche area leads to low level of competition.						
2	High availability of jobs in market within and outside country.						
3	Starting salary package better than other jobs.						
4	Opportunity for placement						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
	in government sector.						
5	100 percent Job placement.						
6	Job stability due to niche area of specialization.						
7	Job switching is quite easy.						
8	Opportunity to work with multinational companies.						
9	Expertise in marine sector opens up vivid job opportunities.						
10	As marine infrastructure is static at one place there are less transfers and no frequent changes in location.						
11	Good scope for business after studying in maritime education.						
12	Personal liking to shipping related work.						
13	Exposure to international trade.						
14	Well defined career advancement and promotion channel.						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
15	Quick promotions can be availed.						

20. Challenges perceived by you in Non- Sea Based Job

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	Lack of job opportunities due to changing industry dynamics.						
2	Less job placement if the particular segment of the industry faces slow-down.						
3	No growth for promotions.						
4	Market dependent sector leading to frequent layoffs and job instability.						
5	Government regulations and support is not adequate.						
6	Frequent changes in international trade norms/currency rates leading to stiff competition.						
7	Less opportunity in country compared to foreign nations.						
8	Working from far off locations mostly away from urban areas.						
9	Salary lower compared to other jobs.						
10	Gender Discrimination may be faced.						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
11	Work Life Balance is difficult due to nature of job.						
12	Lack of available courses in country for promotion/specialization.						
13	Time consuming and High cost is to be incurred for up gradation of skills.						

21. Which is your dream company to work with?

22. What is your expected CTC (in Rs.)? 2,00,000-3,00,000 3,00,001-5,00,000
5,00,001-8,00,000 Above 8,00,000

23. Are you aware that for future promotions you need to clear specific examinations?
Yes No

24. Would you like to appear for such exams? Yes No

SECTION-II (PREFERENCE FOR SEA BASED JOBS)

25. Opportunities perceived by you in Sea Based Job

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	Availability of various choices in sea based jobs.						
2	Ever increasing demand of maritime crew.						
3	Opportunity for early placement.						
4	Good starting salary package.						
5	No tax on salary income.						
6	Opportunity to work with						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
	multinational crew.						
7	Opportunity to command fleet of personnel.						
8	Opportunity to explore sea and encountering sea related adventures.						
9	Personal liking for long travelling and sea voyages.						
10	Travel to foreign countries as a part of job.						
11	Faster promotions compared to other jobs.						
12	Well defined promotion and career advancement prospects.						

26. Challenges perceived by you in Sea Based Job

Sr. No.	Statement	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	Separation from family for long duration due to long voyages in sea.					
2	Unsettled lifestyle due to unavailability at one place and away from home for long durations.					
3	Lack of social life as mostly away from home.					

4	Feel isolated as away from family (friends).					
5	Often feels like Depression.					
6	Difficulty in understanding multi-language and ethnicity.					
7	Discrimination on basis of rank.					
8	Discrimination on basis of sex.					
9	Discrimination on basis of nation/ethnicity.					
10	Discrimination on basis of language.					
11	Bullying by colleagues and seniors.					
12	Rise in maritime piracy leading to threat for crew including death.					
13	Stringent Maritime Laws making crew accountable for unavoidable circumstances.					
14	Environment compliance related criminalization of crew members like oil spillage, destruction of sea life, etc.					
15	Reduced shore leaves leading to less time for relax and rejuvenate.					
16	Difficult to prove the competency.					
17	Fear of high accident rates.					
18	Fatigue due to long working hours at ship.					

19	Extended working hours due to unavoidable situations like change in sea weather, cyclones, colleague sick, etc.					
20	Different climatic condition making body frequently not adaptable to various climate challenges.					
21	Continuous noise and vibration due to vessel leading to specific body related stress.					
22	Limited moving space as restricted to vessel leading to physical discomfort for long durations.					
24	Sleeping and eating disorders.					
25	Fear of Communicable Diseases.					
26	Often deprived of sleep.					
27	Causes Sea Sickness in the body.					

27. Which is your dream company to work with?

28. What is your expected CTC (in Rs.)? 2,00,000-3,00,000 3,00,001-5,00,000
5,00,001-8,00,000 Above 8,00,000

29. Are you aware that for future promotions you need to clear specific examinations?

Yes No

30. Would you like to appear for such exams? Yes No

Annexure-V

Questionnaire To Study The Perception Of Opportunities And Challenges In Maritime Sector Of Alumni

1. Name : _____
2. Age (in years): 18-25 26-35 36-45 46 and above
3. Gender: Male Female Transgender
4. Educational Qualification: Under Graduate post-Graduate Others _____
5. Type of Course: Graduate Degree Post-Graduate Degree Post-Graduate Diploma Others _____
6. Name of the Institute (Tick only one):
B.K. School
Ganpat University
Gujarat Maritimes University
Other _____
7. Name of the course you had enrolled in (Tick only one) (Please write full name of the course):
Bachelors in Technology (B. Tech)
Graduate Marine Engineering (GME)
Post-Graduate Diploma in Maritime Management (PGDM)
Master in Law (LLM)
Post-Graduate Diploma in Maritime Law (PGDM-Law)
Others _____
8. Which specialization did you pursue?
Port Management
Logistics and Shipping Management
Marine Engineering
Maritime Law
Others _____
9. What was the duration of your? 1 Year 2 Years 4 Years Others _____
10. In which year did you pass the maritime course? _____
11. How did you receive your placements? Campus Placements Through Portal
Through Reference Others _____
12. Did you clear any specialized maritime exam? Yes No

13. Name the first company in which you availed your job. _____
14. What was your first designation? _____
15. What was your initial salary in the first job (in Rs.)?
 2,00,000-3,00,000
 3,00,001-5,00,000
 5,00,001-8,00,000
 Above 8,00,000
16. How to do rate your initial salary? Very Good Good Neutral Poor Very Poor
17. Name the company or organization in which you are currently working (Please mention full name)_____
18. Where are you currently working? Within State Within Country Abroad
19. What is your present designation?_____
20. State your current yearly salary (in Rs.)
 2,00,000-4,00,000
 4,00,001-6,00,000
 6,00,001-8,00,000
 8,00,001-10,00,000
 Above 10,00,000
21. In which sector do you currently work? Non-Sea Based Job Sea-Based Job
- ✓ *If you have ticked Non-Sea Based Job, then go to Section-I and*
- ✓ *If you have ticked Based Job, then go to Section-II*

SECTION-I (PREFERENCE FOR NON-SEA BASED JOBS)

22. Opportunities perceived by you in Non- Sea Based Job

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	Well defined promotion and career advancement channel in the organization.						
2	The starting salary package received was good.						
3	Good chances for quick promotions.						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
4	There are vivid job choices and opportunities in market having expertise in maritime sector.						
5	There is good opportunity to work with Multinational companies.						
6	Exposure to International Trade is available.						
7	Availability of jobs in market is high within and outside country.						
8	Based on the lucrative job offers I can easily switch over from private sector to government sector and vice-versa.						
9	As the industry set-up and infrastructure is at one place, there are chances of fewer transfers.						
10	The HR and its policies are employee friendly.						
11	Enrichment of knowledge due to nature of job.						
12	My nature of work is well defined with clear goal setting.						
13	Job stability due to niche area of specialization.						
14	There is personal liking to Shipping related work.						
15	Good scope for business after studying in maritime education						
16	Availability of leaves on time.						
17	Superiors and Bosses promotes healthy work environment.						
18	Organization has a well-defined bonus/increment policy.						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
19	Performance appraisal is done in a transparent way.						
20	Colleagues are supportive and friendly.						

23. Challenges perceived by you in Non- Sea Based Job

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	The promotion does not take place quickly.						
2	Salary is lower compared to other jobs.						
3	Gender discrimination takes place in the organization.						
4	Up gradation of skills is time consuming and costs very high.						
5	Frequent changes in international trade norms/currency rates lead to stiff competition and creates tough situation for jobs.						
6	The opportunity is less in home country compared to foreign nations.						
7	There is a lack of Job Opportunities due to changing industry dynamics.						
8	Frequent transfers are part of job.						
9	For promotions certain specialization or skills are required which could be availed through courses, but such courses are not available in the country.						
10	High salary discrimination amongst employees even if they are working on the same level (cadre).						
11	There is lack of cooperation from top management.						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
12	Subordinates do not cooperate.						
13	There is no bottom-up feedback mechanism.						
14	Work is to be done from far off locations which are often away from urban areas.						
15	Market dependent sector leads to frequent layoffs and job instability.						
16	The chances of Job Placement are less if the particular segment of the industry faces slow-down.						
17	Government regulations and support are not adequate to the shipping and port companies.						
18	Inability to maintain Work Life Balance due to nature of the job.						
19	Company nominates for training on timely basis.						
20	Employees are often sent for counselling.						
21	As a part of career development company promotes the employees on timely basis.						
22	Company helps in career planning of the employees.						
23	The reward system is fair and transparent.						

SECTION-II (PREFERENCE FOR SEA BASED JOBS)

24. Opportunities perceived by you in Sea Based Job

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	The marine sector is a growing sector.						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
2	There is well defined promotion and career advancement channel in my organization.						
3	Quick promotions are availed in my organization.						
4	Joining after leave is easy.						
5	On boarding at ship is immediately available after I return from the leave.						
6	Enrichment of knowledge on duty.						
7	Crew member are supportive and like family members.						
8	Captain promotes healthy work environment.						
9	Duties and shift are well laid out and transparent.						
10	Shore leaves are adequate.						
11	My job fulfils personal liking for long travelling and sea voyages.						
12	It provides opportunity to travel in foreign countries.						
13	Commanding fleet of personnel is a good task.						
14	In my current job I get chance to work with a						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
	multinational crew.						
15	Well defined leaves like earned leave, casual leave, maternity/paternity leave, etc.						
16	Organization provides knowledge about various applicable laws and on the job learning.						
17	Company often nominates me for training programmes.						
18	Company has very good HR policy and practice.						
19	Marine course provides an opportunity for working in different types of jobs.						
20	Difficulty in understanding multi-language and dealing with multi ethnic crew.						
21	Discrimination is experienced on the basis of Rank.						
22	Discrimination is experienced on the basis of gender.						
23	Discrimination is experienced on the basis of Nation/Ethnicity.						
24	Discrimination is experienced on the basis of Language.						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
25	Bullying is experienced in the organization.						
26	Longer Working hours due to unavoidable situations like change in sea weather, cyclones, colleague sick, etc.						
27	High accident rates are observed.						
28	Lack of moving space available leads to physical discomfort for long durations.						
29	Difficult to prove competency in the job.						
30	Reduction in shore leaves leading to less time to relax and rejuvenate.						
31	Maritime piracy has risen, leading to threat for crew including death.						
32	Stringent maritime laws are making crew accountable for unavoidable circumstances.						
33	Criminalization of crew members is a worry due to issues like oil spillage, destruction of sea life, etc.						
34	Separation from family for long duration is faced						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
	due to long voyages in sea.						
35	One is away from home for a long duration of time.						
36	Lack of social life due to distance from home.						
37	Isolation is felt due to staying away from family (friends).						
38	Body becomes weak due to different climatic condition and it cannot tolerate different climatic changes.						
39	Due to lack of space, time and non-availability of equipment, exercise cannot be carried out.						
40	Continuous noise and vibration due to vessel lead to specific body related stress.						
41	Problems like shift wise working, change in sleep cycle, etc. faced when on the job.						
42	Sleep and eating disorders are faced on job						
43	Threat to suffer from communicable diseases.						
44	One feels quite depressed.						

Sr. No.	Statement	Not Applicable (0)	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
45	One is often deprived of sleep.						
46	Sea Sickness is felt.						
47	Fatigue due to long working hours at ship.						
