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The Effect of Working Conditions of Seafarers Working in Internal Waters on Work Performance as a Result of Leading the Work

ABSTRACT

In business life, employees sacrifice many things from their social lives in return for the time they spend at work, and in return, they have expectations to be satisfied in terms of business life. The sacrifices and expectations of employees in each sector are different from each other. In this study, the effects of the working conditions of seafarers in the maritime sector, which is a sector where employees give almost all their attention and time to their work and are easily affected by the negativities that occur, are examined. As a result of the seafarers being affected by the sea life, when the work desire and motivation losses are at the highest level, the thought of leaving the job manifests itself and it can reach dimensions that will cause occupational accidents due to reasons such as carelessness and wrong or incomplete work caused by the work of the seafarer. In this study, a group of seafarers consisting of 8 "captains", 8 "chief engineers", 76 "seamen" and 64 "oilers", who have worked on ships for a long time, experienced the difficulties arising from the ship, stayed away from family and social life, and had to work with more difficult conditions compared to the current ship conditions, and a group of seafarers who are younger than the other group, many of whom have their first work experience, in total. In the study, forms consisting of 4 sections were distributed using the survey method and 5-point Likert scaling as research management. The sociodemographic Information Form, Maslach Burnout Scale, Organizational Stress Scale, and Beck Depression Inventory were used to obtain demographic information of the participating seafarers. The data were interpreted using the SPSS statistical program. The statistical methods used were normal distributions with the Kolmogorov-Smirnov test, reliability with the Cronbach Alpha test, and parametric and non-parametric tests applied to analyze other data. As a result of the study, it was revealed that marital status and having children did not increase the stress level of seafarers, and age and working time on board had an effect on burnout levels.

Keywords: Seafarer and Burnout, Stress in Seafarers, Maritime Management, Ship Management, Maritime Transport and Management Engineering.

1. INTRODUCTION

The development of the maritime sector started in BC and has been developing and changing all the time and is an important sector worldwide. 70% of the world's population is settled on the sea and ocean coasts. Sea and oceans are very important in terms of both cargo and passenger transport and personnel employment. The share of the maritime sector in world trade is quite high compared to other sectors. The maritime sector includes multiple transport models and takes 81% of the total share of world trade. There are multiple employment areas within the maritime sector and it progresses with a high amount of manpower. It is seen that the labor force working in the maritime sector, especially on the ship, works under more difficult conditions than in other working areas (Karadağ, 2019). One of the biggest reasons for these difficult conditions is the need for a continuous active labor force, the difficulties of the ship's working environment, weather conditions, weather conditions and navigation difficulties at sea and in the oceans, and many factors such as the density in ports. Even though the working conditions of the ships have started to improve with the advancement of technology, uncontrollable weather, and sea conditions are important factors. The problems in the labor force on the ships caused the shipowners or ship operators to create working conditions that may adversely affect the seafarers with the desire to benefit more from the existing labor force.

It is known that seafarers experience stress due to heavy workload, intense stress and great responsibilities during their working periods. These negativities cause major occupational accidents as well as negative effects on seafarers working on ships. Looking at the work accidents that occur, it is seen that there are many emotional states such as carelessness, fatigue and unwillingness to work in the content of the errors

caused by the seafarer (Tunçel, 2020). In order to correct and prevent errors caused by seafarers on board ships, corrective and remedial arrangements are continuously made within the ship.

While studies are carried out to reduce occupational accidents caused by working conditions and sea conditions on ships, it is also necessary to increase the work performance of seafarers. According to Campbell, job performance is related to the act of doing a job. Job performance is a means to an end or a goal within a job, role, or organization, but not the actual results of the actions performed in a job (Campbell et al., 1990). In order to increase the work performance of seafarers on ships, various methods such as premium payments to employees, promotion in positions and quota increases for internet usage are applied (Budiyone et al., 2022). By using these methods, it is expected that the seafarer will increase his/her work performance on the ship and set an example for his/her colleagues.

It should not be forgotten that the basis of the maritime sector is a service sector. Not only freight transport is carried out. At the same time, passenger and livestock transports are also carried out. Apart from cargo, passenger and livestock transports have heavier working conditions and stress is felt more in the service area. The maritime sector has recently moved into the tourism branch and offers serious services with yacht tourism and cruise transport. Stress and work efficiency of seafarers and other employees should be examined from different perspectives, especially in these areas for the entertainment and relaxation of passengers.

The maritime sector is subject to many international and national legal regulations and rules. The maritime sector receives serious support from the land side in the operation of ships and progresses with the integrated operation of land and sea. Maritime enterprises are the management structures that manage the ships from land. Agencies are the institutions that meet the ships in every port, handle the communication and information flow with the land, and handle the paperwork. The ship is at the centre of the sector. It is an important vehicle that operates from its construction until the dismantling process, which is managed and guided, and has personnel with minimum requirements at all times (Aslam et al., 2020). There are ship types that will meet the volumetric criteria according to the cargo demand and have structural differences according to the type of cargo. Although the operating principles are basically the same, it is necessary to employ effective and experienced seafarers in accordance with the cargo and ship structure (Losiewicz et al., 2019). Seafarers are the personnel who fulfill the management and administration of the ships through the ship, assist in the management, and carry out the maintenance, maintenance and technical works of the ship. The classification of these seafarers according to the seafarers and pilot master training and examination directive is shown in Table 1.

Table 1. Classification of Seafarers (Okşaş et al., 2022).

Degree	Deck	Sections			
		Engine	Deck Crew	Enginee Crew	Auxiliary class
1	Oceangoing Master	Oceangoing Chief Engineer	Deck Bosun	Enginee Bosun	Cooker
2	Oceangoing Chief Officer	Oceangoing 1st Engineer	Able Seaman	Oiler	Steward
3	Oceangoing Watchkeeping Officer	Oceangoing Engineer	Seaman		
4	Limited Master	Limited Chief Engineer (3000 KW)			
5	Limited Chief Officer	Limited 1st Enginner (3000KW)			
6	Limited Watchkeeping Officer	Limited Engineer (3000KW)			
7	Electricity Officer				

Although the working areas of seafarers vary according to the type and size of the ship they work on, it is also the place where they maintain their social lives outside of work (Radic, 2019). In the limited or partially limited space, they maintain during the time they work in their lives, dealing with the same people for months, and sharing the same work and social environment increases the degree of difficulty of their work. If the working environment or rest area is not suitable or does not meet expectations, it will inevitably affect work performance (Oldenburg et al., 2020).

Seaman qualification levels and levels; The ships they can work with according to their size in gross tonnage, and their size and carrying capacity indirectly determine the areas they work in. These areas are defined under international law of the sea. Inland waters is the sea area on the land side of the line where the territorial waters of the state are measured. Including the coves, gulfs, ports, and closed seas adjacent to the coast. The characteristics of ships operating in inland waters are given in Table 2.

Table 2. Characteristics of Ships Operating in Inland Waters.

Ship Type	Working Area	Count	Number of Seaman
Seabus	Marmara, İzmir Bay	32	703
Fast Ferry	Marmara, İzmir Bay	10	205
Car Ferry	Marmara, İzmir Bay	25	432
Marine Taxi	Marmara	10	45
Passenger Ferry	Marmara, İzmir Bay	37	406
Slightly Passenger Ferry	İzmir Bay	13	78
High Speed Passenger Ship	Marmara, İzmir Bay	2	46
Passenger Ship	İzmir Bay	1	32

Seafarers generally require certain qualifications. One is not ready for the psychology of working on a ship only by completing the necessary documents. Ship life consists of separations, moments when the connection with the outside is sometimes absent or even disconnected for a long time and deprivation, and it is necessary to choose a little bit aware of the profession. The seafarer should know himself and determine whether he is suitable or not. These qualifications are given in Table 2.

Table 3. Specifications of Ships Operating in Inland Waters

Characteristics required from seafarer		
Within the scope of the draws	Personal characteristics	Physical and mental health
Stcw Certificate	Hardworking, Adventurous	Powerful Psychology
Ship type specific certificates	Disciplined, Morally strong	Required health report
Training certificates required by the company	Compliance with the hierarchical order	Alcohol and drug addiction

Although the working areas of seafarers vary according to the type and size of the ship they work on, it is also the area where they live their social lives (An et al., 2020). Some features that should be in the work areas of seafarers are given in Table 4.

Table 4. Some Features That Seafarers Should Have in Their Work Areas (Fotteler, et al., 2020).

Working Areas		
Deck	Engine Area	Living Area
Work areas must be clean	Vibration-free areas	Cabins in standard specification
Sufficient equipment space	Greasy and non-slippery areas	Adequate air conditioning system
Safety of load areas	Adequate lighting	Social areas and sports field
Manoeuvring areas are safe	Workshops are safe and equipment is adequate	Adequate dining and recreation areas

2. LITERATURE

As a result of the literature review, studies on working conditions and turnover in maritime employment were examined. The studies are mainly on job stress, career expectations, human resources management and maritime adaptation. Some of the studies conducted in the maritime field are given below.

Muslu (2008), in his study, made a master's thesis on human resources management and working principles in the maritime sector. In his study, he discussed the maritime sector, the parties that direct the work in the maritime sector, and labour relations in the maritime sector.

Taşdelen et al (2016), addressed the work-family and family-work conflicts of seafarers in their study. In the study, 259 seafarers were surveyed. It was determined that different criteria affect work-family conflict. These were stated as age, marital status, employment status, ship type, commitment to duty, and gender.

Zorba (2016), conducted a study on the burnout syndrome of ship captains and ship officers. In his research, the factors causing burnout syndrome were tried to be determined. The Spss statistics program was used as the application program. As a result of the study, it was found that the 25-30 age range was more affected. It is generally stated that work experience is in the range of 1-5 years.

Yorulmaz and Alkan (2017), conducted a study on the perception of working conditions in the maritime sector among university and higher education students. The Spss program was used as a method in the study. As a result of the study, they determined the effect of making a career as income/return at most.

Kurt (2010), examined the effect of working conditions on seafarers in his study. In his study, he applied a burnout syndrome questionnaire to 43 seafarers. The Spss program was used as the application method. As a result, the presence of many factors such as the age of seafarers, insufficient number of seafarers, and long working hours was determined.

Akcanbas and Uslu (2022), examined stress, burnout, depression levels, and their relationships with seafarers. In their study, 200 seafarers were surveyed. The Spss 25 package program was used as a method in the study. As a result of the study, it was seen that the variables of gender, age, marital status, having

children, position in the ship, and working years showed significant differences in the control dimension of the Organizational Stress Scale of seafarers.

Özalp and Ümmet (2022), examined psychological well-being and intolerance of uncertainty in seafarers working in the Turkish maritime sector in their study. In the study, 277 seafarers were surveyed. In this study, the spss package programme was used.

As the number of inland waterway passenger transport vessels is increasing day by day, the number of seafarers is also increasing. It is necessary to create an environment that will enable seafarers to prefer this type of ship and to ensure that the employment of personnel is like other long-distance vessels. When the seafarers are examined, it is seen that research has been carried out on seafarers, especially on stress, working environment, and work-family conflicts. It has been observed that there is no study examining the working conditions of seafarers working in inland waters with near coastal voyages and the effect on job performance as a result of leading them to quit their jobs.

3. METHOD

In the study, a literature review was conducted, academic studies on similar sectors and subjects with different samples were used, five-point Likert scaling from the questionnaire measurement system, which has proven its validity and reliability, was used for the evaluation part, and the collected data were interpreted with the spss statistics 28 programme. The flow diagram of the method used is given in Figure 1.

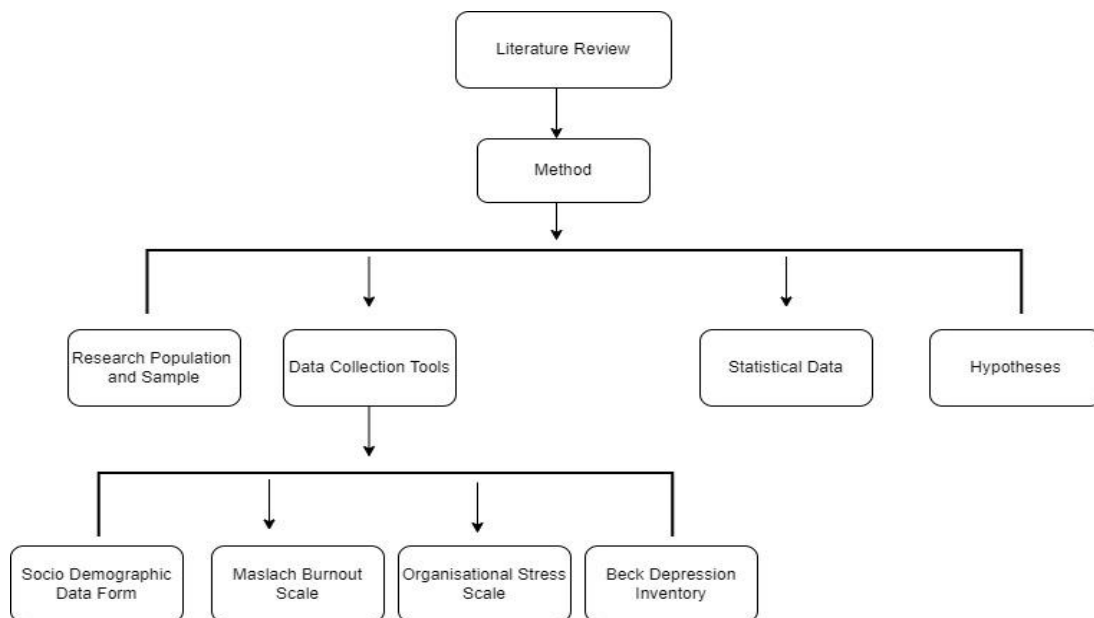


Figure 1. Flow Diagram

3.1. Research Population and Sample

The population of the research covers the ferries in the province of Istanbul, which are called domestic ferries, which do not have a port departure and generally carry only passengers except for the organisation. A period of 2 weeks was given to 41 seafarers working three days a week with a shift system under similar working conditions. The validity of 2 questionnaires was not accepted and the evaluation was completed by limiting the number of seafarers to 156.

3.2. Data Collection Tools

In the research, data were collected using qualitative and quantitative methods, and the general perception of the sample was analysed through questionnaires distributed from the online platform and interviews conducted during the case explanation. The questionnaire part of the study consists of five sections. The Sociodemographic Information Form, Maslach Burnout Scale, Organisational Stress Scale, and Beck Depression Inventory were used to obtain demographic information of the participants. A tabular summary of the data collection tools is given in Table 5.

3.2.1. Socio-Demographic Data Form

Socio-demographic information is presented in Table 5 and was prepared in order to obtain general information about the participants who participated in the survey. In this information, age, gender, education level, professional experience, marriage and having children are the basic information. Socio-demographic Descriptive Information 2 was prepared to measure information such as qualification, current qualification, being in the sector, duration of working offshore, economic support status, salary status before working in inland waters, current salary and new job search. The information and scales used in the questionnaire are summarised in Table 5.

Table 5. Information and Scales Used in the Questionnaire

Socio Demographic Data Form	Maslach Burnout Scale Maslach and Jackson (1981)			Organisational Stress Scale Theorell and et al (1988)			Beck Depression Inventory Aaron T. Beck and et al (1961)
Basic information (age, gender, education level, professional experience, marriage and children)	Emotional exhaustion			Workload			Number of Question: 20 Points Ranges: Minimal Depression: 0-9 Point Light Depression:10-16 Point Moderate Depression: 17-29 Point Severe Depression: 30-60 Point
	Number of question	Question location on the scale	Types of Scale	Number of Question	Question location on the scale	Types of Scale	
	8	1, 2, 3, 4, 5, 16 and 23	Very Low : 8-13 Low :14-20 Middle :21-27 High :28-34 Very High :35-40	7	1, 2, 5, 6, 9, 10 ve 18	Low : 7 -15 Middle : 16-26 High : 27-35	
Socio-economic descriptive information (qualification, current qualification, presence in the sector, duration of working offshore, economic support status, salary status before working in inland waters, current salary status and purpose of seeking new employment)	Depersonalisation			Social Support			(1) Emotional State, (2) Pessimism, (3) Sense of Failure, (4) Dissatisfaction, (5) Sense of Guilt, (6) Sense of Punishment, (7) Self-Hatred, (8) Don't blame yourself, (9) Desire for Self-Punishment, (10) Crying fits, (11) Social Introversion, (12) Indecision, (13) Bodily Image, (14) Focus on Work, (15) Sleep Disorders, (16) Fatigue-Exhaustion, (17) Decreased Appetite, (18) Weight Loss, (19) Somatic Complaints, (20) Interaction with the Opposite sex
	Number of Question	Question location on the scale	Types of Scale	Number of Question	Question location on the scale	Types of Scale	
	7	6, 10, 14, 18, 20, 21 and 22	Very Low : 7-10 Low :11-17 Middle :18-24 High :25-31 Very High :32-35	6	11, 12, 13, 14, 16 ve 17	Low : 6 -13 Middle : 14-22 High : 23-30	
	Personel Success			Control			
	Soru sayısı	Question location on the scale	Types of Scale	Number of Question	Question location on the scale	Types of Scale	
	8	7, 8, 9, 11, 12, 13, 15 and 17	Very Low : 8-13 Low :14-20 Middle :21-27 High :28-34 Very High :35-40	5	3, 4, 7, 8 ve 15	Low : 5 -11 Middle: 12-18 High : 19-25	
	If the result coefficient of the Cronbach Alpha test of the questionnaire items is 0.7 and above, the reliability is generally considered to be good.						

3.2.2. Maslach Burnout Scale

In the study, improvements and adaptations were made to use the "Maslach Burnout Inventory" on seafarers and the burnout dimension was examined in three dimensions.

Table 6. Cronbach's Alpha Reliability Tests of Burnout Sub-Dimensions

	N	Cronbach Alpha	SS
Emotional exhaustion	8	,796	7,23
Depersonalisation	7	,700	5,46
Personel Success	8	,748	5,76

If the result coefficient of the Cronbach Alpha test of the prepared questionnaire items is 0.7 and above, the reliability is generally considered to be good.

3.2.3. Organisational Stress Scale

The 17-item "Organisational Stress Scale", the original scale of which was developed by Theorell et al. (1988) and used by Uslu (2021), who had a similar study on seafarers, was adapted according to the sample and working conditions of the study and 18 items were directed to the participants.

3.2.4. Beck Depression Inventory

The inventory developed by Aaron T. Beck et al. (1961) was examined for validity and reliability by Hisli (1988) and adapted to Turkish by Uslu (2021). The scale consists of 20 self-assessed questions and analyses depression at 4 levels.

3.3. Statistical Methods Used

The data collected by questionnaire method in the study were analysed using SPSS statistical software. Reliability tests of the questionnaires show that the data are normally distributed with the Kolmogorov-Smirnov test, except for depression, based on the significance value $p > 0.05$ in normal distribution.

Descriptive statistical methods were used while evaluating the study data, and Spearman's correlation test was used to evaluate the relationship between the non-parametric data that did not have a normality distribution.

3.4. Hypotheses of the Study

H₁; There is a positive relationship between the age of seafarers and their working time in the open sea and burnout level.

H₂; There is a positive relationship between seafarers' being married and having children and organisational stress levels.

H₃; There is a positive relationship between seafarers' depression, burnout and organisational stress levels.

H₄; There is a positive relationship between age and being in search of a new job.

H₅; There is a positive relationship between emotional exhaustion and organisational stress of seafarers.

H₆; There is a positive relationship between seafarers' depersonalisation levels and organisational stress.

H₇; There is a positive relationship between seafarers' personal achievement levels and organisational stress.

H₈; There is a positive relationship between seafarers' ship type and organisational stress.

H₉; There is a positive relationship between seafarers' new job search and organisational stress.

H₁₀; There is a positive relationship between seafarers' age and organisational stress.

4. ANALYSIS

The information and data obtained as a result of the survey are given below.

Table 7. Analysis Information

Socio Demographic Basic Information I				Socio Demographic Descriptive Information II				Socio Demographic Descriptive Information III								
Gender	Woman	22	12,8 %	Current Competecee	Master	8	5,1%	Economic Situation Outlook	Very Bad	4	2,6%					
	Man	132	87,2 %		Chief Engineer	8	5,1%		Bad	12	7,7%					
Age		21 and below	4		2,6 %	Seaman	76		48,7%	Middle	88	56,4%				
	22 - 30	56	35,9 %		Oiler	64	41,0%		Good	52	33,3%					
	31 - 40	44	28,2 %	Enginee Competecee	Oceangoing Chief Engineer	8	5,1%	Frequency of Sports	Very Little	36	23,1%					
	41 - 50	48	30,8 %		Oceangoing 1 st Engineer	16	10,3%		Little	60	38,5%					
51 and above	4	2,6 %	Limited Chief Engineer		4	2,6%	2 Times A Week		24	15,4%						
Marital Status	Married	88	56,4 %		Limited 1 st Engineer	12	7,7%		4 Times a Week	28	17,9%					
		Single	68	43,6 %	Oiler	32	20,5%	Every Day	8	5,1%						
			Having a Child	Yes	72	46,2 %	Sector Presence	0-1 Year	12	7,7%	Quick Anger	Yes	88	56,4%		
					No	84		53,8 %	1-3 Years	24		15,4%	No	68	43,6%	
Education Status	Lise					72		46,2 %	4-6 Years	24		15,4%		Impatience	Yes	44
		Universite				8		5,1 %	7-10 Years	12		7,7%			No	56
			On lisans	64		41,0 %	10 ve above	84	53,8%	Sometimes	52	33,3%				
				Lisans	12	7,7 %	Oceangoing working years	Not Working	64		41,0%	Never	4			2,6%
Vocational Training	High School				84	53,8%		1-5 Years	60		38,5%		Worrying About Nonsense	Yes		12
		Associate Degree			40	12,8%		5-8 Years	16		2,6%			No	88	56,4%
			Martime Course		28	17,9%		8 Years and above	16	2,6%	Sometimes				56	35,9%
				High School and Undergraduate	4	2,6%	Economic Support	Mtself	32	20,5%		Changeable Mood			Yes	60
High School and Associate Degree	16				10,3%	Households		116	74,4%	Yes			52		33,3%	
	High School adn Course	4			2,6%	Myself and Additional Work		4	2,6%				Sometimes	44	2,6%	
		Deck Competence	Oceangoing Master		4	2,6%		Myself and Social Institution	4		2,6%			Not Taking Risks	Yes	20
				Oceangoing Chief Officer	4	2,6%	Oceangoing Officer	16	10,3%		No	84			53,8%	
Limited Master					16	10,3%		Not Working	60	38,5%		Sometimes			52	33,3%
	Limited Officer				12	7,7%			1000-1500 Usd	44			28,2%		Don't Worry About Unexpected Events	Yes
		Seaman /Able Seaman	36		23,1%	1500-2000 usd			24	15,4%			No	64		41,0%
			Previous Salary (Before Working in Inland Waters)	Not Working	60	38,5%	2000-3500 usd		24	15,4%	Sometimes			44		28,2%
Salary					4500-6000 TL	8	5,1%	3500-5000 usd	4	2,6%		False Speech Anxiety		Yes		56
	6000-7500 TL					32	20,5%	New Job Search	Yes	60				38,5%	No	100
		7500-8500 TL				40	25,6%		No	96			61,5%			
			8500 and above TL	76		48,7%										

Table 8. Average Burnout and Stress Status of The Participants

	N	Average	%	Classification
Emotional Exhaustion	156	21,95	56,2	Very Low
Desensitisation	156	16,28	41,7	Low
Personal Success	156	29,76	76,3	High
Work Load	156	19,56	50,15	Middle
Social Support	156	14,89	38,17	Middle
Control	156	15,97	40,94	Middle

From the burnout score status of the participants, 56.2% experienced low levels of emotional exhaustion, while the personal achievement rate was 76.3%. Depersonalisation was found to be 41.7%. Average stress levels were seen at the minimum score level of the "Medium" level in all sub-dimensions.

Table 9. Distribution of the Factors Affecting Depression Outcomes

Choices	N	%
Emotion State	48	30,8
Pessimism	80	51,3
Sense of Failure	28	17,9
Insatiability	84	66,7
Feelings of Guilt	52	33,3
Sense of Punishment	36	23,1
Self-Hatred	40	25,6
Self-Blame	68	43,6
Self Punishment	4	2,6
Cry Vigil	68	43,6
Social Introversion	48	30,8
Indecision	44	28,2
Bodily Image	56	35,9
Focus on Work - Inability to Focus	52	33,3
Sleep Disorders	84	35,8
Fatigue-Exhaustion	72	46,2
Decreased Appetite	32	20,5
Weight Loss	48	30,8
Somatic Complaints	56	35,9
Interaction with the Opposite Gender	32	20,5

The maximum rate of agreement with the symptoms of depression was 66.7% (N=84) in item 4. The lowest rate of participation is in item 9 with a percentage of 2.6% (N=4). The remaining parts of the percentages belong to the positive answers given to the items.

Table 10. Depression Levels

Depression Levels	N	%
Minimal Depression	92	58,96
Mild Depression	48	30,77
Moderate Depression	12	7,69
Severe Depression	4	2,58
Total	156	100

The depression levels of the participants were as follows: 10.17% (N=16) had a level of depression that should be taken into consideration, 58.96% (N=92) had normal depression and 30.77% (N=48) had minimal depression.

Table 11. Spearman's Correlation Product to Determine the Relationship Between the Scores of Depression, Burnout & Stress Scales

	Emotional Burnout	Depersonalisation	Personal Success	Workload	Control Dimension	Social Support	Depression
Emotional Burnout	1	0,653*	-	0,837*	0,107	0,108	0,562*
Depersonalisation		1		0,528*	0,091	0,375*	0,426*
Personal Success	-0,120	-0,315	1	-	0,355*	-	-
Workload	-	-	-0,011	1	0,086	0,097	0,0530*
Control Dimension					1		0,240
Social Support			-0,842*		-0,099	1	0,071
Depression			-0,079				1

The expression relations of the negative values are indicated in the left part of the table; there is an inverse relationship between personal achievement-emotional burnout, personal achievement-desensitisation, personal achievement-workload, personal achievement-depression and there is an inverse and positive relationship between personal achievement-social support.

There is a linear relationship between emotional exhaustion and control dimension and social support, and there is both a linear and positive relationship between depersonalisation, workload and depression. Depersonalisation has a linear relationship with the control dimension and both a linear and positive relationship with emotional exhaustion, workload, social support and depression.

Workload has a linear relationship with control dimension and social support, and both linear and positive relationships with emotional burnout, depersonalisation and depression. The control dimension has both a linear and positive relationship with personal achievement, while there is only a linear relationship with emotional burnout, depersonalisation, workload, social support and depression. Social support has a positive relationship inversely with personal achievement and linearly with depersonalisation, but only a positive relationship with emotional burnout, workload, control dimension and depression.

There is a linear and positive relationship between depression, emotional exhaustion, depersonalisation and workload, and only a linear relationship with control dimension and social support.

Table 12. Correlation Significance Test on the Burnout Level of Seafarers' Age and Working Time in Open Sea

	Age	Oceangoing Working Time	Emotional Exhaustion	Depersonalisation	Personal Achievement
Age	1	0,426*	-	-	-
Oceangoing Working Time	-	1	-	-	-
Emotional Exhaustion	-0,178	-0,313	1-	0,654*	0,066
Depersonalisation	-0,120	-0,094	-	1	-
Personal Achievement	-0,041	-	-0,085	-0,200	1

According to the test of the significance level of the burnout sub-dimensions of seafarers according to the age and offshore experience of the individuals, there is an inverse proportion between emotional exhaustion and depersonalisation with negative values concentrated on the left side and age and offshore working time. It is observed that there is a positive and linear relationship between the personal achievement dimension and the duration of working oceangoing.

Table 13. Significance Test on the Stress Level of Seafarers Being Married and Having Children

		N	Ort.	Ss	f	p
Workload	Married	88	2,69	0,70	0,153	0,698
	Single	68	2,92	0,76		
	Having a Child	72	2,60	0,71	0,019	0,891
	Not Having Child	84	2,95	0,71		
Social Support	Married	88	2,61	0,77	0,006	0,940
	Single	68	2,31	0,70		
	Having a Child	72	2,64	0,84	1,181	0,891
	Not Having Child	84	2,34	0,64		
Control	Married	88	3,21	0,52	0,537	0,468
	Single	68	3,16	0,56		
	Having a Child	72	3,15	0,52	0,554	0,461
	Not Having Child	84	3,22	0,74		

When we examine the stress levels of seafarers according to their family status and the children they are responsible for, there is no significant difference between the groups and stress scales since the significance values are greater than $p > 0.05$.

Table 14. Significance Result of Being in Search of a New Job with Age

	New Job Search	N	%	Ort.	f	p
Age	Yes	60	38,45	2,46	8,86	0,005*
	No	96	61,55	3,25		

* $p < 0,05$

It is seen that 38,45% (N=60) of the seafarers participating in the research are in search of a new job, there is a difference in the level of significance with the average age and 61% of them are not in search of a new job.

Table 15. Pearson Correlation Significance Analysis on How Seafarers Perceive Their Age, Vocational Training and Economic Income

		1	2	3
1	Age	1	-	-
2	Economic Status Opinion	-0,104	1	0,124
3	Profession Place of learning	-0,060	-	1

There is a negative and inverse relationship between the age status of seaman and their perspective on economic earnings. There is a positive, linear relationship between the level of education received for the profession and economic status.

Table 16. Correlation Test Between Age and Situations of Concern

		1	2	3	4	5
1	Age	1	0,041	0,072	0,138	-
2	False Speech Anxiety	-	1	0,184	0,036	0,097
3	Worrying About Nonsense	-	-	1	0,045	0,200
4	Impatience	-	-	-	1	-
5	Quick Anger	-0,118	-	-0,069	-	1

There is a negative, inverse relationship between seafarers' being angry and age and worrying about making nonsense. The remaining data are positively correlated among themselves.

Table 17. Significant Relationship Test Between Burnout Sub-Dimensions and Total Time Spent in The Sector and Frequency of Doing Sports

	Burnout Sub-Dimensions	1	2	3	4	5
1	Frequency of Sports	1	0,177	0,193	-	0,069
2	Total Work in the Sector	-0,177	1	-	-	-
3	Emotional Exhaustion	-	-0,152	1	0,0654*	-
4	Depersonalisation	-0,011	-0,018	-	1	-
5	Personal Success	-	-	-0,053	-0,085	1

There is a linear positive relationship between the frequency of doing sports, working period in the sector, emotional exhaustion and personal achievement. There is a positive and significant relationship between emotional exhaustion and depersonalisation.

In the maritime sector, seafarers can work 2 contracts in a year and then work again. It is seen that they can change ships or companies whenever they want. In the background, it is seen that seafarers are affected by many controllable and uncontrollable factors during ship changes. In addition, it is seen that they are under the influence of stress arising from intensive working conditions, excessive responsibility and heavy working conditions. There are delays in the adaptation of seafarers to shore during and after the contract. Those who work on the open sea should spend their working environment and social life in the same area with possible foreign personnel during the contract period. Seafarers working in near coastal voyages are more fortunate and it is obligatory to employ Turkish personnel in cabotage voyages. Both culture clash and the work adaptation of seafarers are easier.

As a result of the evaluations made, the range of scores obtained from the sub-dimensions of the stress status of the seafarers is at a medium level. It has been determined that this situation arising in the stress level is due to the fact that the seafarers have been in this business for a long time, adapting to all kinds of positive or negative events and limiting the stress at the appropriate value without allowing it to have an effect on them.

From the correlation analysis between the sub-dimensions of stress, it can be said that the fact that there is a positive relationship between the workload and the other two sub-dimensions of stress, it can be said that the stress experienced in this aspect is effective on the other control and social support dimensions. In the study, there is a negative but significant relationship between the social support sub-dimension and the control dimension. From this point of view, since the social support dimension is a dimension that contains positive expressions compared to the control dimension, it can be said that the inverse proportion will actually progress meaningfully and linearly. When it is examined whether there is an effect of being married and having children on seafarers within the individual factors which are the effects of stress other than work, no significant positivity is observed. Therefore, it is seen that our hypothesis H_2 is not met.

Although their working patterns are on the ship, they do not work in a continuous, isolated way, on the contrary, they work on a 24-hour shift plan, usually 3 days a week on a fixed ship of a well-established company engaged in urban maritime passenger transport. When they are not working, they can easily access sociality according to their wishes and expectations, not on the ship, but in their own settled order in the city, with their families. This situation is seen to be a factor in reducing stress and negative psychological effects.

Stress level is very important as it is the cornerstone of other expressions used in the study. As a result of the disappointments experienced by seafarers as a result of starting their working life with high expectations and the questioning process they experience, it cause psychological and systematic disorders and negatively affects people's work lives and daily lives. When the feedback given to the burnout studies

conducted on seafarers in the study is taken into consideration, a harmonious result emerges when the stress level is taken into consideration. It starts to be seen in individuals who cannot get rid of the second stage of stress.

According to the survey data of the participants, it has been evaluated that emotional exhaustion and depersonalisation, which are negatively directed sub-dimensions of burnout, are not a dimension that should be taken into consideration and that will pose a problem. Supporting this, it was observed that the positively directed personal achievement sub-dimension was high in 116 seafarers on average, and it was observed that even if burnout occurs in seafarers, it will disappear quickly.

From the correlation analyses conducted between the burnout levels in the study, it was determined that there is a positive relationship between emotional exhaustion and insensitivity, and in cases where one of the expressions is high, the other will be affected in an equivalent way. Since personal achievement is a positive expression compared to the other two sub-dimensions, the negative relationship with the other sub-dimensions is actually positive. As seen in the study, emotional burnout and depersonalization are seen at minimum levels in data where personal achievement is high.

People need to motivate themselves in their working lives, feel that they should enjoy working and prepare themselves against negativities for continuous good psychology. Individuals put the problems they experience on the back burner in order not to experience problems in the financial dimension of the responsibilities in their lives, continue to work efficiently, and hold on to their jobs in a way that they will never quit with continuity commitment if it is the best job available at that moment, regardless of its difficulty and conditions. This situation causes the individual to become even more deadlocked within himself/herself and prevents the identification of his/her stage of depression and discomfort.

Depression, which is the biggest psychological disorder that we do not expect seafarers to suffer from, will not go away unless it is treated, and it is very susceptible to being confused with other mental disorders. Stress, which is also its cornerstone and which is exposed to severe stress for a long time, goes beyond the level of burnout and reaches the level of depression.

Working conditions can also trigger this disease and drag the consciousness to the act of ending life. In the data on depression in the study, we see that 104 and 68 seafarers participated in the items of numbness (16), pessimism (8), sleep disorders (60), fatigue (64), crying spells (40) and self-blame (32), respectively. Even at a minimal level, we can say that employees are depressed due to themselves, general fatigue and uncertainty about the future. When we look at the scores, we see that there are 92 people with minimal depression and 48 people with mild depression. When we look at the answers given to the questions, we can attribute this situation to factors such as lack of self-confidence, lack of peace with oneself and future anxiety.

From the correlation analyses, we see that depression has an inverse relationship with personal development, which is the opposite of our positive statement. We understand that there is a positive and linear relationship between the emotional exhaustion and depersonalization sub-dimensions of burnout and that the contents of the items are expressions that support depression.

In working life, age is a factor that makes a difference in the perspective of work, expectations, reactions to events, stress management, commitment to work and performance. When we take the ages as generations, they have similar characteristics, and the fact that individuals who have grown up and grown up by taking into account situations such as growing up conditions, being born into technology, learning lessons from the difficulties experienced by the previous generation are in the current working segment is manifested by impulsive and emotionless decisions made in the field of work. When these young people get to know different people in working life and adapt themselves to real business life rather than job expectations, they begin to have the characteristics of the next generation.

In the analysis of the relationship between age and working time on the high seas and burnout sub-dimensions of seafarers, it is seen that age and working time on the high seas are positive and significant. It is known that 64 of the participants have never worked offshore. From this point of view, it can be said that those who are older than those who participated in the survey have offshore experience and since it is known that they have been in their current working area for a long time, it can be said that there are people who had to work in the challenging ship life on the high seas at least 10 years ago.

Another relationship that supports the above explanation is the inverse relationship between age and burnout sub-dimensions. As age increases, the level of reaction to events, situations and behaviors is at a

level that will cause the least harm to the individual. Findings supporting this situation were also found in the evaluation of burnout itself. It is seen that our hypothesis H1 is supported by this result.

5. CONCLUSION

In this study, the effect of working conditions of seafarers working in inland waters on the job performance of seafarers' tendency to quit their jobs was investigated. Working conditions of seafarers working in inland waters are quite challenging and these conditions cause seafarers to quit their jobs. Factors such as insufficient rest hours, excessive stress, excessive work intensity, emotional exhaustion, depersonalization, depression, insomnia, low wages, inadequate occupational safety measures, and excessive working hours can cause workers to quit their jobs. These factors can also affect job performance. When these factors affecting job performance turn into job dissatisfaction, they cause stress and anxiety because it takes time to comprehend new events, and if they are constantly emphasized and intensely felt, they begin to affect the mental health of the individual. These problems cause damage to the individual's bond with the organization, make the employee question and cause employee losses if not recovered. It is also not a good thing if the level of stress that is controlled does not increase or decrease, that is, not reacting to stress does not eliminate it and even takes it further and turns it into burnout. Individuals in a state of burnout experience persistent fatigue and a gradual decline in productivity and effort, which, when coupled with acts of failure, can lead to depression.

As a result of the research, it was revealed that being married and having children did not increase the stress level of seafarers. The fact that seafarers have a family enables them to have a more positive and solution-oriented approach to the problems they experience at work. Having a sense of responsibility arising from family and children prevents them from making sudden decisions. The desire to be with their families prevents the problems they experience on board and prevents the tendency to move to other companies. Disruption of the existing established order due to job change and the necessity to establish a new order in a new place remains in the background. For these reasons, seafarers are able to remain calmer and approach events in a conciliatory manner in the face of incidents that occur at work compared to their colleagues who are not married and do not have children.

A positive correlation was found between seafarers' age and the duration of working in the open sea on the level of burnout. As the age of seafarers increases, the desire to work decreases and the desire to retire increases. As age increases, reluctance to the difficult conditions of ship life begins. The retirement age of seafarers is seen to be at the beginning of this reluctance. The fact that the savings and investments made over time with the start of the profession reach a certain level leads the seafarers to leave the ship. While the seafarers who first started the profession have more dreams about the future, the realization of some of these dreams by the older seafarers creates a lack of motivation in business life over time.

The fact that seafarers working on the high seas have seen all kinds of difficulties and bad conditions turns into a more monotonous and calm business life when they move to inland waterway transportation. In this case, it causes the same work to be done every day, the same order to be maintained and the same ports to be seen again and again. This monotony causes seafarers to get bored with their work and experience burnout in a shorter time than their colleagues who have never been on the open sea.

Failure to change the turnover tendencies of the workforce working in inland waters will negatively affect work performance. Keeping the working conditions the same, not making any improvements and not listening to the complaints of the seafarers will cause more loss of seafarers for the company in the future. The influence of the seafarers working in the same company on each other when they leave their jobs is also an important factor in the working environment. When a seafarer in the same work environment can no longer endure the current conditions and leaves, it will create serious psychological pressure on other seafarers.

Maritime organizations should improve the existing working conditions of seafarers in order to increase their motivation to work and prevent them from leaving their jobs. All complaints and suggestions should be taken into account, the seafarer making the complaint or suggestion should be listened to seriously and improvements should be made quickly within the available means. Seafarers should be made to feel that they are part of the ship and the company they work for. Seafarers should feel a sense of belonging to the organizations they work for. In this way, seafarers will be able to work more efficiently in the enterprise and work accidents will be prevented. In this way, companies will not only not lose their trained and expert seafarers, but also prevent many material and moral losses by preventing possible work accidents.

REFERENCES

- Akcanbas, M. & Uslu, K. (2022). Gemi adamlarında stres, tükenmişlik, depresyon düzeyleri ve ilişkilerinin incelenmesi. *OHS Academy*, 5 (1), 33-49. <https://doi.org/10.38213/ohsacademy.1084980>.
- An, J., Liu, Y., Sun, Y. & Liu, C. (2020). Impact of work–family conflict, job stress and job satisfaction on seafarer performance. *International Journal of Environmental Research and Public Health*, 17(7), 2191.
- Aslam, S., Michaelides, M. P. & Herodotou, H. (2020). Internet of ships: A survey on architectures, emerging applications, and challenges. *IEEE Internet of Things Journal*, 7(10), 9714-9727.
- Budiyono, B., Widyastuti, T. & Rianto, M. R. (2022). Effect analysis of compensation, work environment and leadership on ship crew loyalty with work motivation as intervening variable at pt. Salam Pacific Indonesia Lines. *Dinasti International Journal Of Management Science*, 3(3), 566-577.
- Campbell, J. P., McHenry, J. J. & Wise, L. L. (1990). Modeling job performance in a population of jobs. *Personnel Psychology*, 43(2), 313-575.
- Fotteler, M. L., Andrioti Bygvraa, D. & Jensen, O. C. (2020). The impact of the Maritime Labor Convention on seafarers' working and living conditions: an analysis of port state control statistics. *BMC Public Health*, 20(1), 1-9.
- Karadağ, Z. (2019). *Denizcilik sektöründe çalışan gemi adamları ve kara personelinin psikolojik belirti düzeylerinin, çalışma koşulları ile birlikte incelenmesi*. [Yüksek Lisans Tezi], Sosyal Bilimler Enstitüsü. Çağ Üniversitesi.
- Kurt, Ö. (2010). *Gemide çalışma koşullarının gemi adamları üzerindeki olumsuz etkileri*. [Yüksek Lisans Tezi]. Fen Bilimleri Enstitüsü. İstanbul Teknik Üniversitesi.
- Łosiewicz, Z., Nikończuk, P. & Pielka, D. (2019). Application of artificial intelligence in the process of supporting the ship owner's decision in the management of ship machinery crew in the aspect of shipping safety. *Procedia Computer Science*, 159, 2197-2205.
- Muslu, A. (2008). *Denizcilik sektöründe insan kaynakları yönetimi ve çalışma ilişkileri*. [Doktora Tezi]. Marmara Üniversitesi.
- Okşas, O., Emecen Kara, E. G., Özbey, T., Kaçmaz, E. & Karaoğlu, M. (2022). Identifying similarities of national yacht qualifications using hierarchical clustering methods. *Sustainability*, 14(19), 12622.
- Oldenburg, M., Felten, C., Hedtmann, J. & Jensen, H. J. (2020). Physical influences on seafarers are different during their voyage episodes of port stay, river passage and sea passage: A Maritime Field Study. *PLOS One*, 15(4), e0231309.
- Özalp, M., & Ümmet, D. (2022). Türk gemi adamlarında psikolojik iyi oluşun kişilik özellikleri ve belirsizliğe tahammülsüzlük değişkenlerine göre incelenmesi. *Uluslararası Anadolu Sosyal Bilimler Dergisi*, 6(4), 1395-1413.
- Radic, A. (2019). Occupational and health safety on cruise ships: Dimensions of injuries among crew members. *Australian Journal of Maritime & Ocean Affairs*, 11(1), 51-60.
- Taşdelen, U., Aksoy, R. & Çakmak, A. F. Gemi adamlarının iş-aile ve aile-iş çatışmasına ilişkin bir saha çalışması. *Dokuz Eylül Üniversitesi Denizcilik Fakültesi Dergisi*, 8(2).
- Tunçel, A. L. (2020). *Dökme yük ve genel kargo gemi kazalarının analizi*. [Yüksek Lisans Tezi]. İskenderun Teknik Üniversitesi.
- Uslu, O. (2021). 'Being Alone Is More Painful than Getting Hurt': The Moderating Role of Workplace Loneliness in the Association between Workplace Ostracism and Job Performance. *Central European Business Review*, 10(1), 19-38.
- Yorulmaz, M. & Alkan, G. (2017). Denizcilik öğrencilerinin denizcilik sektöründeki kariyer beklentilerinin ve sektör çalışma koşulu algılarının analizi. *Journal of Social Humanities Sciences Research (JSHSR)*, 4(10),471-480.
- Zorba, Y. (2016). Tükenmişlik Sendromu: Gemi kaptanları ve güverte zabıtları üzerine tanımlayıcı bir çalışma. *Dokuz Eylül Üniversitesi Denizcilik Fakültesi Dergisi*, 8 (1), 97-127. <https://doi.org/10.18613/Deudfd.74852>.