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## Emotional Exhaustion and Family Support in the Link Between Transactional Leadership and Crew Retention

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### Abstract

This study examines how transactional leadership (TL) influences the retention intention (RI) of Indonesian seafarers through the mediating role of emotional exhaustion (EE) and the moderating effect of family support (FS). The research uses the Job Demands–Resources (JD–R) model to explain how excessive supervision, strict compliance, and punitive control can increase psychological strain and emotional fatigue. Data were collected from 298 crew members working on medium-sized vessels operated by national shipping companies and analyzed using Partial Least Squares–Structural Equation Modeling (PLS–SEM). The results show that TL positively affects EE ( $\beta = 0.292, p < 0.001$ ) and indirectly reduces RI ( $\beta = 0.037, p = 0.018$ ), while maintaining a direct positive impact on RI ( $\beta = 0.317, p < 0.001$ ). EE partially mediates the TL–RI relationship, suggesting that emotional fatigue can lead to “forced retention” driven by family and financial obligations. FS has a strong positive influence on RI ( $\beta = 0.576, p < 0.001$ ) and moderates the EE–RI link ( $\beta = 0.102, p = 0.007$ ), indicating its buffering role against emotional strain. Overall, the study highlights that balancing transactional leadership with supportive resources and structured recovery policies is crucial for sustaining crew retention in the maritime industry.

### KEYWORDS

transactional leadership, emotional exhaustion, family support, retention intention, Job Demands–Resources model, PLS–SEM, seafarers.

### Introduction

Issues concerning seafarer retention have become increasingly urgent for the maritime industry. The global maritime sector operates within a VUCA environment characterized by Volatility, Uncertainty, Complexity, and Ambiguity which requires organizations to manage their human resources effectively to remain adaptive and resilient (Bacon et al., 2020). Optimizing fleet operations is critical for inter-island energy distribution in Indonesia (Sirait et al., 2025). At the same time, (Gurning et al., 2022) emphasize that innovations such as floating logistics facilities offer sustainable solutions for marine transportation in small islands. Indonesian seafarers, known for their strong work ethic, confidence, and resilience in challenging sea conditions, represent a vital strategic asset that enhances national competitiveness in global trade (Junus et al., 2023).

Retention problems are particularly critical among crews serving on medium-sized vessels, who often face multiple challenges such as low wages, long separations from family, strict supervision from captains, and limited technical and welfare resources. These conditions can negatively affect their psychological well-being and willingness to remain in their company. Studies in Indonesia indicate that compensation, placement, and organizational culture have significant effects on seafarer retention (Samosir et al., 2021). However, other studies reveal that job stress and mental health problems substantially reduce motivation and the intention (Brooks & Greenberg, 2022; Svetina et al., 2024). (Burhanuddin et al., 2022), further demonstrated that organizational

commitment and job satisfaction are important indicators of turnover intention in shipping companies. Together, these findings underline that retention intention among seafarers remains a persistent and fundamental issue.

Conflicts between job demands and family responsibilities, coupled with limited onboard facilities and high workloads, often lead to fatigue and emotional exhaustion among seafarers (Buscema et al., 2025; Ma & Liao, 2025). International reports highlight complaints from seafarers regarding complex working conditions, restricted communication with families, and extended contract durations, all of which contribute to chronic stress (Justesen et al., 2024). This study assumes that emotional exhaustion functions as a mediating psychological mechanism that links transactional leadership to reduced retention intention among crew members. Understanding this mediating role is therefore essential in the context of Indonesian seafarers.

Leadership plays a decisive role in shaping employees' perceptions, attitudes, and intentions to stay within an organization. In the maritime sector, transactional leadership remains widely practiced due to its emphasis on compliance and performance-based rewards and punishments. Previous studies indicate that transactional leadership, which enforces procedural discipline and uses reward-punishment systems, can enhance safety and adherence to operational protocols (Elshaer et al., 2025; Tian et al., 2020). Nevertheless, interviews with several Indonesian crew members revealed that captains' directive and authoritarian approaches often increase psychological pressure. Within such demanding work environments, the impact of transactional leadership on retention intention may vary depending on the balance between control, support, and crew autonomy.

In maritime operations, the most prominent form of transactional leadership is management-by-exception (MBE), a control-oriented approach that focuses on identifying and correcting errors. MBE is divided into two types: active and passive. In active MBE, leaders proactively monitor performance and address problems immediately, whereas passive MBE involves leaders responding only after issues arise (Bass, 1990). Aboard ships with rigid hierarchies and stressful conditions, this style often creates an atmosphere of punishment and fear. Empirical evidence suggests that passive MBE is closely linked to emotional exhaustion, as subordinates feel unsupported and deprived of autonomy (Kanste et al., 2007; Kelly & Heard, 2020). Such dynamics can drain psychological energy and weaken retention intention, especially when high work demands are not balanced by emotional or family support.

While several studies argue that transactional leadership can enhance job satisfaction and trust through clear rules and structures (Hutama et al., 2024), it may also generate job stress and emotional strain (Thao et al., 2022). Most prior research on leadership and turnover intentions has focused on corporate, healthcare, and education sectors; studies on Indonesian seafarer retention remain scarce. Furthermore, transactional leaders dominate maritime workplaces, while transformational, ethical, or servant leaders are less common. Important variables such as emotional exhaustion and family support have rarely been investigated within maritime settings, indicating a clear gap in existing literature. This gap highlights the need to examine how transactional leadership and emotional exhaustion jointly influence retention intention among Indonesian seafarers.

Family support acts as a vital buffering factor in such demanding occupational environments. Emotional encouragement from family members helps strengthen seafarers' psychological resilience against exhaustion and stress. Prior studies show that social and family support significantly reduces burnout and turnover intention, thus enhancing employees' willingness to remain in their jobs (G. Chen et al., 2024; Y. Chen et al., 2024). In Indonesia's

collectivist culture, where familial values are deeply embedded, the moderating role of family support becomes even more pronounced.

A recent meta-analysis found that supervisor behaviors aligned with family-supportive values are negatively correlated with burnout and turnover intention while positively influencing commitment, reinforcing the protective function of family support (Luan, 2025). For seafarers, family support serves not only as an external social resource but also as a motivational factor that fosters emotional stability and resilience in demanding maritime environments. Accordingly, this study proposes a conceptual framework that explores the interaction among transactional leadership, emotional exhaustion, and family support in predicting Indonesian seafarers' retention intention. The study aims to provide both theoretical contributions to leadership and occupational psychology literature and practical insights for maritime organizations in developing effective human resource management strategies.

#### Theoretical Framework and Hypotheses Development Job Demands-Resources (Jd-R) Theory

This study draws on the Job Demands-Resources (JD-R) Model developed by (Bakker & Demerouti, 2007), which offers a comprehensive framework for explaining how work environments influence employee well-being and performance, particularly in high-pressure settings such as maritime operations. The model posits that every occupation can be described in terms of job demands and job resources. Job demands refer to the physical, psychological, social, or organizational aspects of work that require sustained effort such as heavy workload, time pressure, and emotional strain which, when excessive, may lead to stress and exhaustion. In contrast, job resources are aspects of work that help individuals achieve goals, alleviate demands, and promote growth and motivation, including supervisory support, autonomy, and constructive feedback (Demerouti & Bakker, 2011).

The JD-R model emphasizes two key psychological processes (Figure 1). The first is the health impairment process, where excessive demands and insufficient resources lead to strain, emotional exhaustion, and potential withdrawal. The second is the motivational process, in which adequate resources foster engagement, commitment, and retention (Schaufeli & Bakker, 2004). Within this framework, transactional leadership (TL) is conceptualized as a job demand characterized by strict control, compliance orientation, and performance-based rewards or punishments. Although such leadership promotes discipline and safety, excessive control without supportive resources can heighten psychological strain and deplete emotional energy, ultimately increasing emotional exhaustion and lowering retention intention.

Conversely, family support (FS) serves as a critical external and personal resource that buffers these negative effects. Emotional support from family replenishes psychological energy, enhances a sense of security, and provides motivation to persist despite demanding conditions at sea. Thus, under the JD-R perspective, family support moderates the relationship between emotional exhaustion and retention intention by reducing the detrimental impact of work-related stressors and strengthening seafarers' commitment to remain with their organization.

#### Transactional Leadership

According to (Bass, 1990), transactional leadership is a leadership approach that emphasizes an exchange relationship between leaders and subordinates, in which rewards and punishments are administered based on agreed transactions between managers and employees. Compliance with established rules and performance standards becomes the prerequisite for receiving rewards, while violations lead to

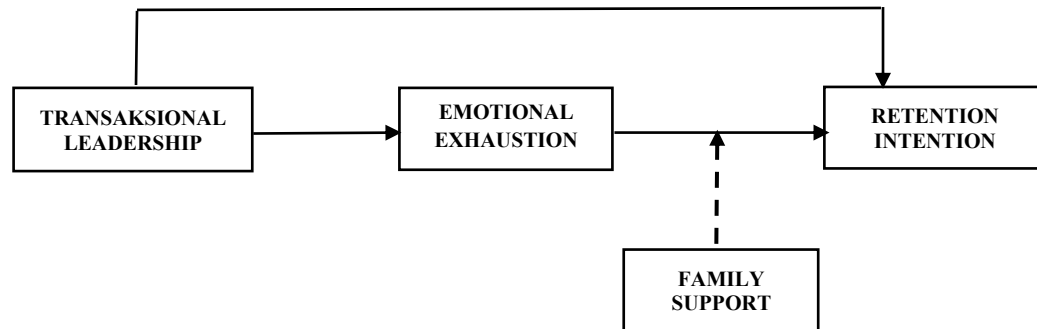


Figure 1. Conceptual model

corrective actions or sanctions (Podsakoff et al., 2005). This leadership style provides a clear structure and reinforces order in the workplace—an environment that demands discipline and procedural adherence. However, subordinates frequently perceive such leadership as a form of excessive control and psychological pressure (Judge & Piccol, 2004).

From the perspective of the Job Demands–Resources (JD–R) Model, close supervision, constant performance monitoring, and strict disciplinary systems represent *job demands* that can deplete employees' emotional energy (Bakker et al., 2014). When these demands are perceived to exceed individual capacity, emotional exhaustion may occur (Schaufeli, 2017), ultimately diminishing employees' intention to stay with the organization. Thus, while transactional leadership is vital for maintaining operational safety and procedural discipline particularly in the maritime industry it can inadvertently harm psychological well-being and undermine retention when applied rigidly. Excessive emphasis on compliance, evaluation, and reward–punishment systems may foster a tense work climate that depletes seafarers' emotional resources and heightens physical and psychological strain.

In contemporary leadership theory, transactional leadership is viewed as a reciprocal exchange between supervisors and subordinates where accomplishments are rewarded and deviations are corrected (Bass, 1985). Although effective in ensuring order and accountability, this approach can induce psychological tension when leaders focus excessively on control and punishment. In the maritime context, where hierarchical command structures are deeply ingrained, overuse of management-by-exception (MBE) particularly in its *passive* form tends to create a stressful, error-focused work environment and has been associated with higher rates of safety violations (Kılıçlı et al., 2025; Kjellevoid Olsen et al., 2021). This situation can drain the psychological resources of ship crews and cause emotional exhaustion related to work stress in various organizations. (Mathieu & Gilbreath, 2025), Such conditions deplete seafarers' psychological resources, leading to emotional exhaustion, a key dimension of burnout characterized by chronic mental fatigue, loss of enthusiasm, and diminished empathy toward work and colleagues (Maslach et al., 2001; Maslach & Schaufeli, 1997).

Building on the JD–R framework, sustained exposure to high job demands such as long working hours, strict supervision, and inflexible performance targets can erode personal energy reserves, especially when not offset by adequate social or organizational support (Bakker & Demerouti, 2017). In this view, transactional leadership, particularly *passive MBE*, functions as a social stressor that heightens psychological strain by reducing subordinates' sense of control over their work. This interpretation aligns with, (Hobfoll, 1989, 2001) Conservation of Resources (COR) Theory, which posits that individuals seek to preserve their emotional and psychological resources; when these are

depleted through negative interactions with supervisors, employees may respond by disengaging, lowering commitment, or contemplating withdrawal from the organization. In the context of Indonesian seafarers, emotional exhaustion resulting from rigid transactional leadership practices may significantly weaken retention intention, particularly when family support is limited. Conversely, strong familial support can buffer these adverse effects—helping seafarers endure emotional fatigue by reinforcing their sense of moral and economic responsibility toward their families. In this way, family support operates as a protective resource that counteracts the psychological strain of transactional leadership and sustains commitment to the maritime profession.

Hypothesis 1. Transactional leadership has a negative impact on retention intention

#### The Mediating Role of Emotional Exhaustion

Emotional exhaustion refers to a psychological condition in which an individual's emotional and mental energy becomes depleted. It is characterized by persistent fatigue, negative attitudes toward one's job, and a diminished sense of personal accomplishment (Maslach et al., 2001). In most cases, emotional exhaustion develops gradually as a consequence of prolonged work-related stress (Upadyaya et al., 2016).

Within the Job Demands–Resources (JD–R) framework, excessive job demands such as constant supervision, corrective feedback, and punitive control intensify psychological strain and heighten the risk of burnout. The pressure stemming from transactional leadership reduces seafarers' psychological resources, including their sense of security, autonomy, and self-worth. Anxiety, frustration, and depersonalization often arise from the imbalance between high job demands and limited available resources, which ultimately leads to more severe emotional exhaustion (Bakker et al., 2014). Empirical studies have shown that seafarers rarely have the opportunity to “disconnect from work,” making psychological recovery difficult and accelerating exhaustion thereby increasing the risk of mental health problems in the maritime workforce (An et al., 2022; Brooks & Greenberg, 2022; Ma & Liao, 2025). Moreover, when crew members' efforts are undervalued or treated merely as obligations, their access to psychological and social rewards becomes limited. Such conditions foster a resource loss cycle, wherein employees continuously expend energy without sufficient recovery, leading to chronic emotional fatigue (Wright & Cropanzano, 1998). Within this framework, emotional exhaustion acts as a mediator, bridging the negative influence of transactional leadership on seafarers' declining retention intention.

Emotional exhaustion thus plays a critical mediating role by serving as the psychological mechanism that translates leadership-induced pressure into reduced commitment and desire to stay. Recent studies describe emotional exhaustion as an “affective bridge” that connects workplace stressors to

withdrawal behaviors—such as lower organizational commitment and stronger turnover intention (Dukhaykh, 2023; Džambić et al., 2025). This state of depletion erodes individuals' ability to derive positive meaning from their work, thereby weakening their motivation to remain even when external factors such as financial incentives persist. Consequently, emotional exhaustion not only represents a form of psychological fatigue but also functions as a critical pathway through which destructive leadership practices affect behavioral outcomes, particularly employee retention in high-risk maritime settings. When corrective or disciplinary leadership pressure continues without adequate emotional support, intrinsic motivation and organizational attachment tend to decline. This process reinforces emotional exhaustion as a psychological channel that transforms job-related stress into an increased desire to disengage or leave the workplace. In other words, the greater the intensity of control and the lower the interpersonal support from superiors, the stronger the role of emotional exhaustion as a key trigger for the reduction of seafarers' retention intention.

Hypothesis 2. Transactional leadership is positively related to crew emotional exhaustion

#### Emotional Exhaustion and Retention Intention

An individual's emotional state strongly influences their workplace behavior (Yao et al., 2022). As noted by (Lazarus, 1991) employees experiencing positive emotional conditions are more likely to demonstrate stronger organizational attachment, greater willingness to engage in extra-role behavior, and sustained loyalty to their company. Conversely, several studies have revealed that when employees experience negative emotions characterized by stress, fatigue, and frustration they tend to exhibit withdrawal behaviors and a reluctance to continue their work (Saleh et al., 2023). Specifically, emotional exhaustion refers to a prolonged state of physical and psychological fatigue that erodes motivation, engagement, and commitment toward one's job (Maslach et al., 2001; Nagle et al., 2024; Sariraei et al., 2024).

According to the Job Demands–Resources (JD–R) Model, health deterioration manifested through the loss of energy and reduced organizational involvement occurs more rapidly when high job demands are not balanced by sufficient job resources (Bakker et al., 2014). For seafarers, emotional exhaustion diminishes their ability to invest personal resources into their tasks and organizational relationships. As a result, they may adopt defensive attitudes, including reduced loyalty, stronger turnover intentions, and decreased enthusiasm to remain with the organization. Within this context, emotional exhaustion emerges as a critical psychological factor that negatively affects retention intention, highlighting the importance of emotional well-being in sustaining long-term commitment among maritime crew members.

Hypothesis 3. Emotional exhaustion is positively related to retention intention

#### The Mediating Role of Emotional Exhaustion

Within organizational settings, work-related factors influence employees' attitudes and behaviors primarily through their emotional responses (Barsade & Gibson, 2007). Recent research (Chaves-Montero et al., 2025; Costin et al., 2023) supports the view that emotional exhaustion arises from sustained job stress, which subsequently leads to lower job commitment and higher turnover intention, along with other negative workplace behaviors. In line with Hypothesis 2, transactional leadership may serve as a significant stressor that drains subordinates' cognitive and emotional resources through strict supervision, continuous performance evaluation, and the frequent use of reward–punishment mechanisms.

To avoid further depletion of resources, employees who experience emotional exhaustion tend to reduce positive behaviors such as loyalty, engagement, and the intention to remain, instead adopting defensive strategies aimed at preventing additional losses (Wright & Cropanzano, 1998). Persistent emotional fatigue has been empirically shown to lower commitment levels and increase employees' inclination to leave their organization (Džambić et al., 2025; Zhang et al., 2025). This depletion diminishes their intrinsic motivation to stay, thereby weakening retention intention.

Accordingly, when transactional leadership creates emotional strain in the workplace, the psychological depletion represented by emotional exhaustion (EE) becomes the key mechanism explaining why such leadership ultimately reduces seafarers' willingness to remain employed. Emotional exhaustion thus serves as a critical mediating pathway, transforming the stress and pressure of transactional management into decreased organizational attachment and heightened turnover tendencies among maritime crew members.

Hypothesis 4. Emotional exhaustion mediates the relationship between transactional leadership and crew retention intention.

#### The moderating effect of family support

As defined by (Greenhaus & Powell, 2006), *family support* refers to the emotional, instrumental, and motivational assistance provided by family members to an individual in fulfilling their job responsibilities. This support may include empathy, understanding, practical help, and encouragement all of which strengthen an employee's emotional resilience. Consequently, family support serves as a vital mechanism that helps individuals cope with work-related stress and mitigates its negative effects on overall well-being (Voydanoff, 2005). Within the Job Demands–Resources (JD–R) Model, family support is viewed as both a job and personal resource that enhances motivation and emotional endurance. For seafarers, family support helps buffer the impact of high job demands and emotional exhaustion by enabling psychological recovery and replenishing depleted emotional resources. The presence of strong family support provides new emotional energy, facilitates effective coping, and reinforces psychological resilience (Bakker et al., 2014; Schaufeli & Bakker, 2004). As a result, crew members are more likely to remain dedicated to their organizations and maintain a strong retention intention, even under intense work-related pressure.

Conversely, when family support is lacking, seafarers lose one of their most essential external resources. Emotional exhaustion without familial backing amplifies negative attitudes toward work, increases turnover intentions, and triggers a resource loss spiral (Hobfoll, 2001). Thus, family support moderates the negative relationship between emotional exhaustion and retention intention where higher levels of family support weaken the detrimental effect of emotional exhaustion on the intention to stay.

Hypothesis 5. Family support moderates the relationship between emotional exhaustion and retention intention, such that the negative effect of emotional exhaustion on retention intention is weaker at higher levels of family support and stronger when family support is low.

Furthermore, seafarers who receive insufficient family support are more vulnerable to the negative effects of transactional leadership. Without emotional recovery from outside the workplace, the psychological burden caused by supervision and performance pressure tends to intensify, increasing the risk of emotional exhaustion. In this regard, strong family support can alleviate the indirect effect of transactional leadership on emotional exhaustion, thereby protecting employees' well-being and retention intention.

Hypothesis 6. Family support moderates the indirect effect of transactional leadership on retention intention through

emotional exhaustion. When family support is high, this indirect negative effect becomes weaker; conversely, when family support is low, the effect becomes stronger.

## Methods

### Sample and Procedure

The data for this study were collected through a structured survey administered to seafarers employed by national shipping companies in Indonesia. Participants included officers, deck crew, and engine crew representing various hierarchical positions on medium-sized vessels. The research team coordinated with human resources departments and ship captains, who were informed about the purpose of the study and later assisted in distributing the questionnaires electronically via the company’s internal communication platforms and official email system.

The questionnaire began with an introductory statement explaining the study’s objectives, ensuring voluntary participation, and guaranteeing the confidentiality of responses. To minimize common method bias and enhance the accuracy of results, data were collected using a two-wave time-lagged design over a two-month period (Podsakoff et al., 2003). In the first wave (Time 1), 600 questionnaires were distributed to measure transactional leadership, and in the second wave (Time 2), respondents assessed their emotional exhaustion, retention intention, and family support.

A total of 298 valid responses were obtained, representing a response rate of approximately 49.7%, which is acceptable for organizational field surveys conducted in maritime settings. This sample size was deemed adequate based on PLS-SEM statistical power requirements (J. Hair & Alamer, 2022), ensuring robust estimation and generalizability. Most respondents reported 2–10 years of sailing experience, representing a group with intermediate professional tenure that is particularly relevant for examining retention, emotional exhaustion, and leadership dynamics in maritime contexts. Demographic details of the participants are presented in Table 1.

### Instrument

Each research variable transactional leadership, emotional exhaustion, intention to retain, and family support was measured using well-established scales validated in prior studies. All items were rated on a five-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (5). The questionnaire items were carefully adapted and modified to align with the Indonesian cultural context, ensuring that potential bias in scale interpretation was minimized. Following the recommendation of (Edunov et al., 2018), a back-translation procedure was applied before distributing the instrument, as the participating seafarers primarily use the Indonesian language in national shipping companies. A professional translator with expertise in maritime terminology conducted the translation and back-translation process. The

resulting instrument was deemed suitable for field data collection, as the back-translation results indicated no significant discrepancies between the original and translated versions, confirming the semantic equivalence and validity of the measurement tool. Measurement Scale can be observed in table 2.

### Common Method Bias

In survey-based research, data for both endogenous and exogenous variables are often collected from the same respondents at the same point in time, which can introduce common method bias (CMB) (Memon et al., 2023). To address this issue, the study employed the Variance Inflation Factor (VIF) test proposed by (Kock, 2015), which integrates multicollinearity diagnostics among constructs to identify potential method bias. As a general rule, data are considered free from common method bias if all VIF values are below 3.3, or more conservatively, below 3.0. Meeting this threshold indicates that the dataset is not significantly affected by CMB.

A pilot test was also conducted to evaluate the clarity and reliability of the questionnaire items. The results demonstrated satisfactory Cronbach’s Alpha values, confirming that respondents clearly understood the items, the questions were well-formulated, and the overall structure and completion time of the survey were reasonable. Based on these outcomes, it was concluded that the questionnaire was valid, reliable, and free from substantial method bias, making it appropriate for full-scale data collection. The detailed VIF results are presented in Table 3 below.

Table 1. Respondent Demographics (N = 298)

Characteristics	Category	Frequency (n)	Percentage (%)
Gender	Male	278	93.3
	Female	20	6.7
Age	< 25	56	18.8
	25-30	102	34.2
	31-40	88	29.5
	> 40	52	17.5
Positions on Board	Second Officer	36	12.1
	Third Officer	30	10.1
	Second Engineer	28	9.4
	Third Engineer	34	11.4
	Fourth Engineer	22	7.4
	Deck Ratings/AB, OS	68	22.8
	Engine Ratings/Motorman	54	18.1
Sailing Experience	Cook/Steward	26	8.7
	< 2 year	38	12.8
	2-5 year	104	34.9
	6-10 year	88	29.5
> 10 year	68	22.8	

Table 2. Measurement Scale

Variable	Dimension	Statement Items	Reference Source
Transactional Leadership (TL)	1. Contingent Reward	1. My supervisor provides clear guidance on how to perform tasks in order to earn rewards.	(Bass, 1990) (Hussain et al., 2017)
	2. Management-by-Exception Active	2. My supervisor gives recognition or rewards when I achieve my work targets.	
	3. Management-by-Exception Passive	3. My supervisor closely monitors my work to prevent mistakes from occurring.	
		4. My supervisor immediately corrects or reprimands me when an error happens.	

Variable	Dimension	Statement Items	Reference Source
<b>Retention Intention (RI)</b>	1. Affective Retention Intention	1. I have a strong desire to continue working for this company.	(Kyndt et al., 2009)
	2. Continuance Retention Intention	2. Staying with this company provides me with important job stability.	
	3. Normative Retention Intention	3. The benefits I receive from this company make me want to remain employed here.	
		4. I choose to stay because leaving this company would be disadvantageous for me.	
		5. I feel it would be inappropriate to leave this company abruptly.	
		6. I believe the company has invested significantly in me, and therefore I should remain.	
<b>Emotional Exhaustion (EE)</b>	1. Physical Fatigue	1. My work on the ship leaves me physically exhausted for long periods.	Maslach, 2015) (Brady et al., 2020)
	2. Affective/Emotional Fatigue	2. I feel emotionally drained because of my job on board.	
		3. I often lose the motivation to complete my work tasks.	
		4. I frequently feel empty or powerless due to my workload.	
		5. My job on the ship has reduced my psychological energy and vitality.	
<b>Family Support (FS)</b>	1. Family Instrumental Support	1. My family is always willing to assist me when it comes to work-related matters.	(King et al., 1995; Wayne et al., 2006)
		2. My family provides tangible support that helps me perform my job effectively.	
	2. Family Emotional Support	3. My family encourages me to face challenges at work with confidence.	
		4. My family understands the pressures I experience while working at sea.	
		5. My family listens to my concerns and frustrations about my job.	
		6. My family makes me feel loved and cared for, even when we are far apart.	

**Table 3.** Varian Inflation Factor (VIF)

	VIF
EE -> RI	1.121
FS -> RI	1.292
TL -> EE	1.000
TL -> RI	1.456
FS x EE -> RI	1.111

**Table 4.** Pilot Test Results

	Cronbach's alpha
EE	0.844
FS	0.930
RI	0.910
TL	0.830

**Pilot Test**

Before distributing the final questionnaire, a pilot test was conducted to assess the clarity and comprehensibility of the survey statements. A total of forty participants were involved in evaluating all measurement indicators. The primary goal of this pilot study was to determine how effectively the questionnaire functioned as a communication tool between the researcher and respondents, as well as to assess the validity of the measurement scales for each construct (Fazli et al., 2021). All constructs showed high internal consistency, according to the reliability analysis's findings, with Cronbach's Alpha values over 0.80, which is in line with the reliability norms recommended by (J. Hair & Alamer, 2022). These findings confirm that the research instrument was well-designed and suitable for collecting essential empirical data.

Overall, the pilot test revealed that respondents clearly understood the questionnaire items, indicating that the wording was unambiguous and appropriately interpreted. Furthermore, the questionnaire format and the time required for completion were found to be adequate and reasonable. Detailed results of the pilot testing are presented in Table 4.

**Result and Discussion**

**Outer Model**

The results of the convergent validity test (Table 3) indicate that all measurement indicators meet the acceptable threshold, with outer loading values above 0.70 (J. Hair & Alamer, 2022; J. F. Hair et al., 2021), This finding confirms that each item consistently represents its respective latent construct. The Emotional Exhaustion (EE) construct exhibited loading values ranging from 0.78 to 0.89, while Family Support (FS) recorded even higher loadings, ranging from 0.80 to 0.93, with item FS4 identified as the strongest indicator. These results confirm that the measurement items accurately capture the underlying dimensions of perceived family support and emotional strain experienced by seafarers.

Similarly, the Retention Intention (RI) construct produced loading values between 0.698 and 0.912, indicating satisfactory validity, while the Transactional Leadership (TL) construct demonstrated consistent factor loadings between 0.808 and 0.896, reflecting its accuracy in capturing the characteristics of contingent reward and management-by-exception behaviors (Figure 2). Since all constructs satisfied the criteria for convergent validity, the analysis proceeded to the evaluation of the structural model indicating that the indicators accurately represent key aspects of transactional

leadership, particularly in relation to contingent reward and management-by-exception. Given that all constructs met the required criteria for convergent validity, the analysis proceeded to the next stage structural model assessment.

All constructs fulfilled the reliability and validity standards proposed by (J. Hair & Alamer, 2022), as presented in Table 5. The Cronbach's Alpha values ranged from 0.889 to 0.931, exceeding the minimum threshold of 0.70, indicating strong internal consistency across all constructs. Furthermore, the Composite Reliability (CR) values ranged from 0.920 to 0.946, confirming that the measurement items consistently reflect their underlying theoretical constructs. These findings demonstrate that the measurement model possesses strong reliability and construct validity, ensuring dependable estimation in the subsequent structural analysis. A detailed summary of the reliability indicators is provided in Table 6.

The Fornell-Larcker discriminant validity test (Table 7) confirms that all constructs are empirically distinct. The diagonal elements representing the square roots of the Average Variance Extracted ( $\sqrt{AVE}$ ) were EE = 0.835, FS = 0.859, RI = 0.865, and TL = 0.867, all of which exceeded their respective inter-construct correlations. According to (Claes Fornell and David F. Larcker, 1981), discriminant validity is achieved when  $\sqrt{AVE}$  values are greater than the construct's correlations with other variables. Therefore, Emotional Exhaustion (EE), Family Support (FS), Retention Intention (RI), and Transactional Leadership (TL) are confirmed as conceptually distinct constructs.

The correlation results further illustrate the relationships among the variables. Family Support (FS) and Retention Intention (RI) show the strongest correlation ( $r = 0.698$ ), suggesting that higher family support corresponds to stronger retention intention among seafarers. A moderate correlation between Transactional Leadership (TL) and Retention Intention (RI) ( $r = 0.616$ ) implies that structured and performance-oriented leadership contributes to enhancing crew retention. In contrast, the relatively weak association between Emotional Exhaustion (EE) and other variables indicates that emotional exhaustion operates as an independent psychological construct, not directly driven by social or organizational factors.

Overall, the outer model demonstrates strong psychometric robustness, confirming that all constructs possess clear conceptual identities and valid measurement properties without multicollinearity or construct overlap. For clarity and interpretability, a visual summary of the model with labeled path coefficients ( $\beta$ ) is recommended for inclusion in the final presentation or appendix.

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Table 5. Outer Loading

	EE	FS	RI	TL	FS x EE
EE1	0.79				
EE2	0.78				
EE3	0.886				
EE4	0.861				
EE5	0.851				
FS1		0.833			
FS2		0.855			
FS3		0.857			
FS4		0.926			
FS5		0.877			
FS6		0.803			
RI1			0.899		
RI2			0.698		
RI3			0.912		
RI4			0.868		
RI5			0.895		
RI6			0.897		
TL1				0.896	
TL2				0.895	
TL3				0.866	
TL4				0.808	
FS x EE					1.000

Table 6. Validity Convergent

	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
EE	0.891	0.920	0.697
FS	0.929	0.944	0.739
RI	0.931	0.946	0.748
TL	0.889	0.923	0.751

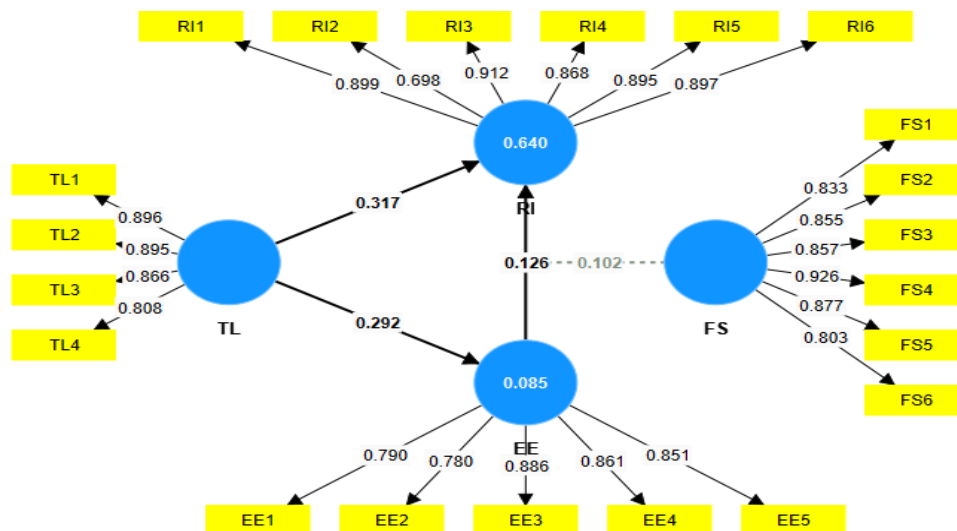


Figure 2. Research Model

**Table 7. Fornell-Larcker Criterion**

	EE	FS	RI	TL
EE	0.835			
FS	0.038	0.859		
RI	0.236	0.698	0.865	
TL	0.292	0.416	0.616	0.867

The correlation results further illustrate the relationships among the variables. Family Support (FS) and Retention Intention (RI) show the strongest correlation ( $r = 0.698$ ), suggesting that higher family support corresponds to stronger retention intention among seafarers. A moderate correlation between Transactional Leadership (TL) and Retention Intention (RI) ( $r = 0.616$ ) implies that structured and performance-oriented leadership contributes to enhancing crew retention. In contrast, the relatively weak association between Emotional Exhaustion (EE) and other variables indicates that emotional exhaustion operates as an independent psychological construct, not directly driven by social or organizational factors.

Overall, the outer model demonstrates strong psychometric robustness, confirming that all constructs possess clear conceptual identities and valid measurement properties without multicollinearity or construct overlap. For clarity and interpretability, a visual summary of the model with labeled path coefficients ( $\beta$ ) is recommended for inclusion in the final presentation or appendix.

**Inner Model**

The R-Square ( $R^2$ ) analysis results indicate that the Emotional Exhaustion (EE) construct obtained an  $R^2$  value of 0.085 and an adjusted  $R^2$  value of 0.082, suggesting that approximately 8.5% of the variance in emotional exhaustion is explained by Transactional Leadership (TL). Although this explanatory power is relatively small, it remains acceptable in social and behavioral research, where psychological constructs such as emotional exhaustion are influenced by multiple external factors beyond the model's scope (J. F. Hair et al., 2019). Hence, even with limited predictive strength, transactional leadership exerts a statistically meaningful influence on seafarers' emotional fatigue.

In contrast, the Retention Intention (RI) construct achieved an  $R^2$  value of 0.640 and an adjusted  $R^2$  value of 0.635, indicating that Transactional Leadership, Emotional Exhaustion, and Family Support collectively explain about 63.5% of the variance in seafarers' intention to remain employed. According to (Marcoulides, 2013), an  $R^2$  value above 0.60 represents a strong predictive capacity, confirming that the model demonstrates high explanatory power for the dependent variable. These findings emphasize that the interaction among leadership style, emotional well-being, and family support substantially determines seafarers' retention behavior. The detailed results are presented in [Table 8](#).

As presented in [Table 9](#), the Goodness-of-Fit (GoF) assessment confirms that the proposed model demonstrates an adequate alignment between empirical data and theoretical expectations. The small difference between the observed and predicted covariance indicates a satisfactory model fit. Specifically, the Standardized Root Mean Square Residual (SRMR) values of 0.081 (saturated model) and 0.086 (estimated model) are both below the recommended threshold of 0.10, indicating good fit (Hu & Bentler, 1999).

Additionally, no significant deviations were detected between the observed and predicted models, as shown by  $d\_ULS$  (1.511–1.726) and  $d\_G$  (0.51) values, both within acceptable limits. The minimal difference in chi-square values between the saturated model (942.881) and the estimated model (958.276) further supports the model's consistency.

Moreover, the Normed Fit Index (NFI) values—0.83 for the measured model and 0.827 for the estimated model—exceed the 0.80 benchmark (Bentler & Bonett, 1980), confirming that the PLS-SEM model demonstrates satisfactory overall fit and structural reliability. Collectively, these results validate that the model adequately represents the empirical relationships among the key constructs examined in this study.

In the structural model, the relative influence of each independent variable on the dependent variable is evaluated through the effect size ( $f^2$ ) test, as presented in [Table 10](#). According to the guidelines proposed by (Jacob Cohen, 1988) and (J. F. Hair et al., 2019),  $f^2$  values are categorized as small ( $0.02 \leq f^2 < 0.15$ ), medium ( $0.15 \leq f^2 < 0.35$ ), and large ( $f^2 \geq 0.35$ ). The relationship between Transactional Leadership (TL) and Emotional Exhaustion (EE) yielded an  $f^2$  value of 0.093, indicating a small but meaningful effect, suggesting that transactional leadership contributes to higher emotional fatigue among seafarers. Transactional Leadership (TL) also demonstrated a moderate effect on Retention Intention (RI) with an  $f^2$  value of 0.192, signifying that leadership behavior emphasizing structure and clear expectations plays an important role in influencing seafarers' willingness to remain with their employer. The effect of Emotional Exhaustion (EE) on Retention Intention (RI) was  $f^2 = 0.04$ , which falls within the small effect range, indicating that emotional fatigue reduces retention, although its influence is less substantial compared to other predictors.

In contrast, Family Support (FS) exhibited a large effect size ( $f^2 = 0.713$ ) on Retention Intention (RI), identifying it as the most influential factor in the model. Lastly, the interaction term (FS  $\times$  EE) produced an  $f^2$  value of 0.035, reflecting a small but significant moderating effect, where family support partially offsets the negative impact of emotional exhaustion on seafarers' retention intention. Overall, these results highlight Family Support as the strongest determinant of retention, while Transactional Leadership and Emotional Exhaustion also play meaningful, though comparatively smaller, roles in influencing seafarers' intention to remain employed.

**Hypothesis Testing**

**Table 8. R-Square**

	R-square	R-square adjusted
EE	0.085	0.082
RI	0.64	0.635

**Table 9. Goodness of Fit (GoF)**

	Saturated model	Estimated model
SRMR	0.081	0.086
$d\_ULS$	1.511	1.726
$d\_G$	0.51	0.51
Chi-square	942.881	958.276
NFI	0.83	0.827

**Table 10. Effect Size (f-square)**

	EE	FS	RI
EE			0.04
FS			0.713
RI			
TL	0.093		0.192
FS x EE			0.035

**Table 11. Direct Effect**

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
EE -> RI	0.126	0.126	0.041	3.077	0.002
FS -> RI	0.576	0.574	0.05	11.404	0.000
TL -> EE	0.292	0.297	0.058	4.996	0.000
TL -> RI	0.317	0.317	0.047	6.795	0.000
FS x EE -> RI	0.102	0.102	0.038	2.7	0.007

**Table 12. Specific Indirect Effect**

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
TL -> EE -> RI	0.037	0.038	0.016	2.375	0.018

To evaluate the direct effect hypotheses, the t-statistics generated from the inner (structural) model were examined. As shown in [Table 11](#), a research hypothesis is considered supported when the t-value exceeds 1.96. In Partial Least Squares (PLS) analysis, bootstrapping simulations are commonly employed to assess the significance of hypothesized relationships. This resampling technique was applied to the study’s dataset to minimize potential bias and address irregularities in the research data distribution.

The results of the direct effect analysis indicate that all paths in the model are statistically significant, with p-values below 0.05. As presented in [Table 8](#), the path coefficient (Original Sample/O) from Transactional Leadership (TL) to Emotional Exhaustion (EE) is 0.292, with a t-statistic of 4.996 and a p-value of 0.000, demonstrating a positive and significant relationship between the two variables. This finding suggests that a higher degree of transactional leadership corresponds to increased emotional exhaustion among seafarers, as this leadership style emphasizes performance monitoring and the use of reward–punishment systems.

The relationship between Emotional Exhaustion (EE) and Retention Intention (RI) is also significant, with a coefficient of 0.126, a t-statistic of 3.077, and a p-value of 0.002. This result implies that emotional exhaustion negatively affects seafarers’ willingness to remain employed higher fatigue levels are associated with lower commitment to stay onboard. At the same time, Transactional Leadership (TL) exerts a direct and significant positive effect on Retention Intention (RI) ( $\beta = 0.317$ ;  $t = 6.795$ ;  $p = 0.000$ ), indicating that despite its potential to generate emotional strain, transactional leadership can enhance retention by providing structure, role clarity, and clear reward mechanisms for crew members.

Furthermore, Family Support (FS) has a strong and significant impact on Retention Intention (RI) ( $\beta = 0.576$ ;  $t = 11.404$ ;  $p = 0.000$ ), highlighting that family support plays a crucial role in sustaining motivation and the willingness of seafarers to continue working. The moderating effect of FS  $\times$  EE on RI is also significant ( $\beta = 0.102$ ;  $t = 2.700$ ;  $p = 0.007$ ), suggesting that family support mitigates the negative influence of emotional exhaustion on retention intention. Overall, the direct effect analysis confirms that all relationships among the variables are significant. The strongest determinant of seafarers’ intention to stay is Family Support, followed by Transactional Leadership, whereas Emotional Exhaustion functions as a risk factor that reduces retention. The moderating role of family support reinforces the conclusion that social and emotional backing from family serves as a protective buffer against work-related stress among seafarers.

In addition, the specific indirect effect analysis for the path Transactional Leadership (TL)  $\rightarrow$  Emotional Exhaustion (EE)  $\rightarrow$  Retention Intention (RI) reveals an indirect coefficient (O = 0.037), with a t-statistic of 2.375 and a p-value of 0.018.

This mediation effect is statistically significant, confirming that emotional exhaustion partially mediates the relationship between transactional leadership and seafarers’ intention to remain employed. Substantively, this finding suggests that transactional leadership practiced by ship captain’s influences retention both directly and indirectly through changes in emotional exhaustion. In other words, leadership styles that rely heavily on supervision and corrective control can shape retention intention via emotional pathways potentially increasing emotional strain. However, this indirect effect is relatively weak but significant due to the small mediation coefficient (0.037), indicating that the direct influence of transactional leadership on retention intention remains more dominant, even when mediation is present. Detailed results are presented in [Table 12](#).

The findings of this study largely support the mechanisms proposed by the Job Demands–Resources (JD–R) Model. Transactional Leadership (TL) was found to have a positive and significant relationship with Emotional Exhaustion (EE) among employees ( $\beta = 0.292$ ;  $p < 0.001$ ). Consistent with JD–R theory, high job demands such as intense performance monitoring, strict adherence to procedures, and the use of sanctions can deplete psychological energy and lead to emotional fatigue. Supporting this, ([Lee & Jo, 2023](#)) observed that when job demands increase without sufficient resources, employee well-being and performance deteriorate, resulting in psychological exhaustion and declining health. Likewise, literature reviews have consistently shown that Passive Management-by-Exception (MBE) the transactional leadership component that emphasizes “monitoring and punishing” is strongly associated with higher emotional exhaustion levels ([Kelly & Hearld, 2020](#)). These findings reflect the conditions experienced by seafarers working under hierarchical and high-pressure environments

An interesting finding of this study is that Transactional Leadership (TL) also had a positive direct effect on Retention Intention (RI) ( $\beta = 0.317$ ;  $p < 0.001$ ). This result aligns with the operational characteristics of the maritime sector, where strict procedures and standardization are essential. The structured nature of transactional leadership, characterized by role clarity and contingent rewards, provides operational certainty and a sense of control both of which encourage retention, particularly in high-risk and tightly regulated environments. Similarly ([Al-Rjoub et al., 2024](#)) found that transactional leadership can yield beneficial outcomes such as compliance, role clarity, and performance when applied in high-pressure or hazardous work contexts, provided it is accompanied by adequate interpersonal support.

Although the direct effect is relatively small, Emotional Exhaustion (EE) still has a significant influence on Retention Intention (RI) ( $\beta = 0.126$ ;  $p = 0.002$ ) and serves as a weak but significant mediator in the TL  $\rightarrow$  RI relationship (indirect effect = 0.037;  $p = 0.018$ ). This aligns with the study by ([Toygar, Arda, Senem Nart, 2023](#)) who found that work–family conflict and

fatigue among seafarers often trigger alienation and turnover intentions, though the intensity of these effects varies depending on the availability of individual or organizational resources. In this study, the positive direction of the EE → RI path may suggest a continuity mechanism, where some seafarers choose to remain despite exhaustion driven by financial responsibilities, family obligations, contractual commitments, or limited job alternatives thus reflecting a form of “forced retention.”.

Family Support (FS) emerged as the strongest predictor in the model, with a significant effect on Retention Intention (RI) ( $\beta = 0.576$ ;  $p < 0.001$ ) and a significant moderating role in the EE → RI relationship ( $\beta = 0.102$ ;  $p = 0.007$ ). These results are consistent with the social buffering hypothesis, which posits that family support can mitigate the psychological impact of job demands on burnout and turnover while fostering stronger emotional attachment, especially in high-stress situations. Recent evidence by (Bai & Zhou, 2025) further underscores the importance of communication policies and family connectivity programs in maritime work, emphasizing that easy and reliable access to family communication serves as a critical “emotional resource” that can either alleviate or intensify psychological strain at sea.

Overall, seafarer retention can be understood as a dynamic negotiation between job demands, leadership structure, and social resources. The combination of significant pathways positive TL → RI, significant TL → EE, a small mediating effect of EE, and the protective role of FS demonstrates this balance. In practical terms, shipping companies must balance transactional leadership practices (e.g., goal clarity, fair compensation, and rule enforcement) with adequate resource support to sustain crew well-being. Consistent with (Li et al., 2025) the provision of resources such as psychological detachment and recovery programs, family-oriented initiatives (e.g., communication subsidies, family inclusion policies), self-regulation training, and supportive leadership practices has been shown to effectively reduce emotional exhaustion and maintain work engagement.

The seafaring literature consistently links fatigue and work-family conflict to negative outcomes such as alienation and turnover. Furthermore, the balance between job demands and available resources during maritime assignments depends heavily on leadership quality and recovery opportunities patterns that align with the findings of this study. Therefore, retention strategies for medium-sized vessels should prioritize managing job demands (e.g., working hours, task rotation, workload distribution) while simultaneously enhancing resources such as recovery facilities, family and supervisory support, safe levels of autonomy, and psychological recovery mechanisms to prevent the downward spiral of energy depletion.

#### Theoretical And Practical Implications

From a theoretical perspective, this study advances the application of the Job Demands-Resources (JD-R) Model within the maritime context by demonstrating that the equilibrium between job demands and social resources is a crucial determinant of seafarers' intention to remain employed. By integrating family support as an external social resource, the study enriches JD-R theory and underscores its relevance in high-demand and isolated occupational settings. Family support serves as a key moderating mechanism that mitigates the adverse psychological effects of emotional exhaustion on retention, an aspect seldom explored in maritime studies. This theoretical extension contributes to a deeper understanding of how personal and non-work resources buffer occupational strain, thereby sustaining employee engagement, well-being, and organizational commitment under extreme working conditions.

From a practical standpoint, the findings emphasize that

shipping organizations should move beyond performance-centric management and adopt leadership systems that integrate procedural discipline with crew welfare initiatives. This may involve revising human resource management policies to include structured fatigue management systems, family-supportive communication programs, and regular psychological well-being assessments. Shipping companies are encouraged to develop leadership training modules for captains and officers that emphasize empathy, communication, and supportive supervision, thereby balancing authority with emotional sensitivity. Furthermore, policy-level interventions such as mandatory rest-hour compliance monitoring and the inclusion of family welfare programs within maritime HR standards can serve as institutional reforms to enhance retention outcomes.

In summary, this study contributes in two important ways: it strengthens the theoretical validation of the JD-R model in extreme occupational environments and provides actionable recommendations for maritime policy and organizational reform. These include restructuring HR frameworks to promote family-inclusive welfare systems and implementing continuous leadership development programs aimed at sustaining both operational performance and crew psychological resilience.

## Conclusion

The findings of this study demonstrate that seafarers' retention behavior aboard medium-sized vessels depends on how effectively job demands are balanced with available resources. Transactional Leadership (TL) exhibits a dual influence: its structured emphasis on role clarity, defined expectations, and performance-based rewards strengthens seafarers' commitment to remain employed, while excessive supervision and punitive control elevate emotional exhaustion and reduce psychological well-being. These findings are consistent with the Job Demands-Resources (JD-R) framework, which asserts that high job demands without adequate resources lead to psychological strain, whereas sufficient job resources—such as supportive communication, constructive feedback, and fair leadership—promote motivation and retention. Although the mediating role of emotional exhaustion in the TL-RI relationship is relatively modest, it remains a notable psychological mechanism influencing crew members' decisions to stay on board.

Furthermore, family support emerged as the strongest determinant of seafarers' retention intention. It significantly moderates the link between emotional exhaustion and retention, indicating that emotional and social support from family members buffers the negative effects of fatigue and fosters resilience. Overall, the model underscores that seafarer retention is shaped by two interrelated dimensions: organizational factors (leadership and work structure) and external social factors (family and emotional support). To strengthen long-term commitment, shipping companies should reform human resource policies to include structured fatigue management, family-inclusive welfare programs, and leadership development focused on empathy and communication.

Ultimately, creating a more humane, sustainable, and loyalty-oriented working environment represents the most effective strategy for ensuring the well-being and long-term retention of Indonesian seafarers.

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## References

- Al-Rjoub, S., Alsharawneh, A., Alhawajreh, M. J., & Othman, E. H. (2024). Exploring the Impact of Transformational and Transactional Style of Leadership on Nursing Care Performance and Patient Outcomes. *Journal of Healthcare Leadership*, 16(December), 557–568. <https://doi.org/10.2147/JHLS496266>
- An, J., Gao, W., Liu, R., & Liu, Z. (2022). Empirical Study on the Relationship Between Vacation Schedule and Seafarers' Fatigue in Chinese Seafarer Population. *Frontiers in Psychology*, 13(March). <https://doi.org/10.3389/fpsyg.2022.838811>
- Bacon, E., Williams, M. D., & Davies, G. (2020). Coopetition in innovation ecosystems: A comparative analysis of knowledge transfer configurations. *Journal of Business Research*, 115(October), 307–316. <https://doi.org/10.1016/j.jbusres.2019.11.005>
- Bai, Y., & Zhou, J. (2025). Coworker support, work-family conflict, job satisfaction, and turnover intention: female employees in post-organizational socialization. *Frontiers in Psychology*, 16(July), 1–11. <https://doi.org/10.3389/fpsyg.2025.1472977>
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. <https://doi.org/10.1037/ocp0000056>
- Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and Work Engagement: The JDR Approach. *Annual Review of Organizational Psychology and Organizational Behavior*, 1(March), 389–411. <https://doi.org/10.1146/annurev-orgpsych-031413-091235>
- Barsade, S. G., & Gibson, D. E. (2007). Why does affect matter in organizations? *Academy of Management Perspectives*, 21(1), 36–59. <https://doi.org/10.5465/AMP.2007.24286163>
- Bass, B. M. (1990). From Transactional to Transformative Leadership: Learning to Share the Vision. *Acorn*, 19(3), 4–6.
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588–606. <https://doi.org/10.1037/0033-2909.88.3.588>
- Brady, K. J. S., Ni, P., Sheldrick, R. C., Trockel, M. T., Shanafelt, T. D., Rowe, S. G., Schneider, J. I., & Kazis, L. E. (2020). Describing the emotional exhaustion, depersonalization, and low personal accomplishment symptoms associated with Maslach Burnout Inventory subscale scores in US physicians: an item response theory analysis. *Journal of Patient-Reported Outcomes*, 4(1). <https://doi.org/10.1186/s41687-020-00204-x>
- Brooks, S. K., & Greenberg, N. (2022). Mental health and psychological wellbeing of maritime personnel: a systematic review. *BMC Psychology*, 10(1), 1–26. <https://doi.org/10.1186/s40359-022-00850-4>
- Buscema, F., Cena, L., Cricenti, C., Zito, M., Bertola, L., & Colombo, L. (2025). Through restful waters and deep commotion: A study on burnout and health impairment of Italian seafarers from the JD-R model perspective. *F1000Research*, 14, 1–23. <https://doi.org/10.12688/f1000research.159198.2>
- Chaves-Montero, A., Blanco-Miguel, P., & Ríos-Vizcaino, B. (2025). Analysis of the Predictors and Consequential Factors of Emotional Exhaustion Among Social Workers: A Systematic Review. *Healthcare (Switzerland)*, 13(5), 1–24. <https://doi.org/10.3390/healthcare1305052>
- Chen, G., Wang, J., Huang, Q., Sang, L., Yan, J., Chen, R., Cheng, J., Wang, L., Zhang, D., & Ding, H. (2024). Social support, psychological capital, multidimensional job burnout, and turnover intention of primary medical staff: a path analysis drawing on conservation of resources theory. *Human Resources for Health*, 22(1), 1–14. <https://doi.org/10.1186/s12960-024-00915-y>
- Chen, Y., Zhou, X., Bai, X., Liu, B., Chen, F., Chang, L., & Liu, H. (2024). A systematic review and meta-analysis of the effectiveness of social support on turnover intention in clinical nurses. *Frontiers in Public Health*, 12(June), 1–15. <https://doi.org/10.3389/fpubh.2024.1393024>
- Claes Fornell and David F. Larcker. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/https://doi.org/10.1177/002224378101800104>
- Costin, A., Roman, A. F., & Balica, R. S. (2023). Remote work burnout, professional job stress, and employee emotional exhaustion during the COVID-19 pandemic. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1193854>
- Demerouti, E., & Bakker, A. B. (2011). The Job Demands?Resources model: Challenges for future research. *SA Journal of Industrial Psychology*, 37(2), 1–9. <https://doi.org/10.4102/sajip.v37i2.974>
- Dukhaykh, S. (2023). Exploring the Relationship Between Work-Family Conflict, Family-Work Conflict and Job Embeddedness: Examining the Mediating Role of Emotional Exhaustion. *Psychology Research and Behavior Management*, 16(November), 4859–4868. <https://doi.org/10.2147/PRBM.S429283>
- Džambić, A., Hadziahmetovic, N., Sateeshchandra, N. G., Chelabi, K., & Fountis, A. (2025). Linking Leadership and Retention: Emotional Exhaustion and Creativity as Mechanisms in the Information Technology Sector. *Administrative Sciences*, 15(8), 1–22. <https://doi.org/10.3390/admsci15080309>
- EduNov, S., Ott, M., Auli, M., & Grangier, D. (2018). Understanding back-translation at scale. *Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing, EMNLP 2018*, 489–500. <https://doi.org/10.18653/v1/d18-1045>
- Elshaer, I. A., Azazz, A. M. S., Kooli, C., Aljoghaiman, A., Elsayy, O., & Fayyad, S. (2025). Green Transformational Leadership's Impact on Employee Retention: Does Job Satisfaction and Green Support Bridge the Gap? *Administrative Sciences*, 15(5), 1–24. <https://doi.org/10.3390/admsci15050177>
- Fazli, W., Fazal, A., & Imran, U. (2021). The Importance and Essential Steps of Pilot Testing in Management Studies: A Quantitative Survey Results. *Journal of Contemporary Issues in Business and Government*, 27(5), 2419–2431. <https://cibg.org.au/>
- Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review*, 31(1), 77–92. <https://doi.org/10.5465/amr.2006.19379625>
- Gurning, R. O. S., Hutapea, G., Marpaung, E., Malisan, J., Arianto, D., Siahaan, W. J., Bimantoro, B., Sujarwanto, Suastika, I. K., Santoso, A., Utama, D., Kurniawan, A., Hardianto, S., Aryawan, W. D., Nanda, M. I., Simatupang, E. J., Suhartana, I. K., & Putra, T. P. (2022). Conceptualizing Floating Logistics Supporting Facility as Innovative and Sustainable Transport in Remote Areas: Case of Small Islands in Indonesia. *Sustainability (Switzerland)*, 14(14). <https://doi.org/10.3390/su14148904>
- Hair, J., & Alamer, A. (2022). Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics*, 1(3), 100027. <https://doi.org/10.1016/j.rmal.2022.100027>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Mediation Analysis*. [https://doi.org/10.1007/978-3-030-80519-7\\_7](https://doi.org/10.1007/978-3-030-80519-7_7)
- Hair, J. F., Ringle, C. M., Gudergan, S. P., Fischer, A., Nitzl, C., & Menictas, C. (2019). Partial least squares structural equation modeling-based discrete choice modeling: an illustration in modeling retailer choice. *Business Research*, 12(1), 115–142. <https://doi.org/10.1007/s40685-018-0072-4>
- Hobfoll, S. E. (1989). Conservation of Resources: A New Attempt at Conceptualizing Stress. *American Psychologist*, 44(3), 513–524. <https://doi.org/10.1037/0003-066X.44.3.513>
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology*, 50(3), 337–421. <https://doi.org/10.1111/1464-0597.00062>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Hussain, S. T., Abbas, J., Lei, S., Jamal Haider, M., & Akram, T. (2017). Transactional leadership and organizational creativity: Examining the mediating role of knowledge sharing behavior. *Cogent Business and Management*, 4(1). <https://doi.org/10.1080/23311975.2017.1361663>
- Hutama, A. A., Noermijati, N., & Wirawan Irawanto, D. (2024). The effect of transactional leadership on employee performance mediated by job satisfaction, job stress and trust. *International Journal of Research in Business and Social Science* (2147- 4478), 13(3), 151–166. <https://doi.org/10.20525/ijrbs.v13i3.3297>
- Judge, T. A., & Piccol, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755–768. <https://doi.org/10.1037/0021-9010.89.5.755>
- Junus, A. D. P., Tjiptoherijanto, P., Sobari, N., & Subroto, A. (2023). The Developing Global Employability Competencies of Indonesian Seafarers for Enhanced End-User Acceptance through Brand Experiences. *International Journal of Social Science and Business*, 7(3), 783–792. <https://doi.org/10.23887/ijssb.v7i3.72904>
- Justesen, S., Javornik, J., & Nguyenová, H. (2024). *Improving seafarer well-being Preliminary findings from the Diversity@Sea pilot project* (Issue 2).
- Kanste, O., Kyngäs, H., & Nikkilä, J. (2007). The relationship between multidimensional leadership and burnout among nursing staff. *Journal of Nursing Management*, 15(7), 731–739. <https://doi.org/10.1111/j.1365-2934.2006.00741.x>
- Kelly, R. J., & Heard, L. R. (2020). Burnout and Leadership Style in Behavioral Health Care: A Literature Review. *Journal of Behavioral Health Services and Research*, 47(4), 581–600. <https://doi.org/10.1007/s11414-019-09679-z>
- King, L. A., Mattimore, L. K., King, D. W., & Adams, G. A. (1995). Family Support Inventory for Workers: A new measure of perceived social support from family members. *Journal of Organizational Behavior*, 16(3), 235–258. <https://doi.org/10.1002/job.4030160306>
- Kılıçlı, E., Ayıldız Ünnü, N. A., & Kuleyin, B. (2025). Unveiling the Impact of Shipmasters' Leadership Style on Safety Climate: A Comprehensive Study. *Journal of ETA Maritime Science*, 13(3), 199–213. <https://doi.org/10.4274/jems.2025.72473>

- Kjelleveid Olsen, O., Hetland, J., Berge Matthiesen, S., Løvik Hoprekstad, Ø., Espevik, R., & Bakker, A. B. (2021). Passive avoidant leadership and safety non-compliance: A 30 days diary study among naval cadets. *Safety Science*, 138(Cc). <https://doi.org/10.1016/j.ssci.2020.105100>
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of E-Collaboration*, 11(4), 1–10. <https://doi.org/10.4018/ijec.2015100101>
- Kyndt, E., Dochy, F., Michielens, M., & Moeyaert, B. (2009). Employee retention: Organisational and personal perspectives. *Vocations and Learning*, 2(3), 195–215. <https://doi.org/10.1007/s12186-009-9024-7>
- Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, 46(8), 819–834. <https://doi.org/10.1037/0003-066X.46.8.819>
- Lee, D. Y., & Jo, Y. (2023). The job demands-resource model and performance: the mediating role of employee engagement. *Frontiers in Psychology*, 14(June), 1–14. <https://doi.org/10.3389/fpsyg.2023.1194018>
- Li, Y., Chen, C., & Yuan, Y. (2025). Evolving the job demands-resources framework to JD-R 3.0: The impact of after-hours connectivity and organizational support on employee psychological distress. *Acta Psychologica*, 253(October 2024), 104710. <https://doi.org/10.1016/j.actpsy.2025.104710>
- Luan, Y. (2025). Consequences of family-supportive supervisor behaviour: A meta-analytic review. *South African Journal of Business Management*, 56(1), 1–15. <https://doi.org/https://doi.org/10.4102/sajbm.v56i1.4642>
- Ma, M., & Liao, R. (2025). Factors affecting seafarers' fatigue: a scoping review. *Frontier in Public Health*, August. <https://doi.org/10.3389/fpubh.2025.1647685>
- Marcoulides, G. A. (2013). *Quantitative Methodology Series Methodology for Business and Management*.
- Maslach, C., & Schaufeli, M. P. (1997). *The Maslach Burnout Inventory. Manual research* (Issue January). <https://www.researchgate.net/publication/277816643>
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job Burnout. *Annual Review of Psychology*, 52, 397–422.
- Mathieu, C., & Gilbreath, B. (2025). The harmful side of absent leaders: Multifactor leadership and employees' job-stress-related presenteeism. *Journal of Management and Organization*, 31(1), 233–255. <https://doi.org/10.1017/jmo.2024.56>
- Memon, M. A., Thurasamy, R., Cheah, J. H., Ting, H., Chuah, F., & Cham, T. H. (2023). Addressing Common Method Bias, Operationalization, Sampling, and Data Collection Issues in Quantitative Research: Review and Recommendations. *Journal of Applied Structural Equation Modeling*, 7(2), i–xiv. [https://doi.org/10.47263/JASEM.7\(2\)01](https://doi.org/10.47263/JASEM.7(2)01)
- Nagle, E., Griskevica, I., Rajevska, O., Ivanovs, A., Mihailova, S., & Skruzkalne, I. (2024). Factors affecting healthcare workers burnout and their conceptual models: scoping review. *BMC Psychology*, 12(1). <https://doi.org/10.1186/s40359-024-02130-9>
- Podsakoff, P. M., Bommer, W. H., Podsakoff, N. P., & MacKenzie, S. B. (2005). Relationships between leader reward and punishment behavior and subordinate attitudes, perceptions, and behaviors: A meta-analytic review of existing and new research. *Organizational Behavior and Human Decision Processes*, 99(2), 113–142. <https://doi.org/10.1016/j.obhdp.2005.09.002>
- Saleh, T. A., Sarwar, A., Khan, N., Tabash, M. I., & Hossain, M. I. (2023). Does emotional exhaustion influence turnover intention among early-career employees? A moderated-mediation study on Malaysian SMEs. *Cogent Business and Management*, 10(3). <https://doi.org/10.1080/23311975.2023.2242158>
- Sariraei, S. A., Shkoler, O., Giamos, D., Chênevert, D., Vandenberghe, C., Tziner, A., & Vasiliu, C. (2024). From burnout to behavior: the dark side of emotional intelligence on optimal functioning across three managerial levels. *Frontiers in Psychology*, 15(April). <https://doi.org/10.3389/fpsyg.2024.1338691>
- Schaufeli, W. B. (2017). Applying the Job Demands-Resources model: A 'how to' guide to measuring and tackling work engagement and burnout. *Organizational Dynamics*, 46(2), 120–132. <https://doi.org/10.1016/j.orgdyn.2017.04.008>
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25(3), 293–315. <https://doi.org/10.1002/job.248>
- Sirait, M., Charnsethikul, P., & Paoprasert, N. (2025). A Multi-Type Ship Allocation and Routing Model for Multi-Product Oil Distribution in Indonesia with Inventory and Cost Minimization Considerations: A Mixed-Integer Linear Programming Approach. *Logistics*, 9(1). <https://doi.org/10.3390/logistics9010035>
- Svetina, M., Perkovič, M., Yang, C., Gu, Y., Mindadze, A., Mikeltadze, N., Davitadze, L., & Gabeledava, G. (2024). Factors Impacting Seafarers' Mental Health and Career Intentions. *Inquiry (United States)*, 61. <https://doi.org/10.1177/00469580241229617>
- Thao, T. D., Van Minh, P., Xuan, N. D., & Thien, P. D. (2022). Impact of leadership style on the employees' occupational stress and intention to leave in Vietnamese supply enterprises in the context of COVID-19. *International Journal of Advanced and Applied Sciences*, 9(8), 84–91. <https://doi.org/10.21833/ijaas.2022.08.011>
- Tian, H., Iqbal, S., Akhtar, S., Qalati, S. A., Anwar, F., & Khan, M. A. S. (2020). The Impact of Transformational Leadership on Employee Retention: Mediation and Moderation Through Organizational Citizenship Behavior and Communication. *Frontiers in Psychology*, 11(March), 1–11. <https://doi.org/10.3389/fpsyg.2020.00314>
- Toygar, Arda, Senem Nart. (2023). Work-family conflict and work alienation among seafarers: The mediating role of emotional exhaustion. *Marine Policy*, 2. <https://doi.org/https://doi.org/10.1016/j.marpol.2023.105759>
- Upadaya, K., Vartiainen, M., & Salmela-Aro, K. (2016). From job demands and resources to work engagement, burnout, life satisfaction, depressive symptoms, and occupational health. *Burnout Research*, 3(4), 101–108. <https://doi.org/10.1016/j.burn.2016.10.001>
- Voydanoff, P. (2005). Work demands and work-to-family and family-to-work conflict: Direct and indirect relationships. *Journal of Family Issues*, 26(6), 707–726. <https://doi.org/10.1177/0192513X05277516>
- Wayne, J. H., Randel, A. E., & Stevens, J. (2006). The role of identity and work-family support in work-family enrichment and its work-related consequences. *Journal of Vocational Behavior*, 69(3), 445–461. <https://doi.org/10.1016/j.jvb.2006.07.002>
- Wright, T. A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied Psychology*, 83(3), 486–493. <https://doi.org/10.1037/0021-9010.83.3.486>
- Yao, Z., Luo, J., Fu, N., Zhang, X., & Wan, Q. (2022). Rational Counterattack: The Impact of Workplace Bullying on Unethical Pro-organizational and Pro-family Behaviors. *Journal of Business Ethics*, 181(3), 661–682. <https://doi.org/10.1007/s10551-021-04918-w>
- Zhang, X., Huang, H., Zhao, S., Li, D., & Du, H. (2025). Emotional exhaustion and turnover intentions among young ICU nurses: a model based on the job demands-resources theory. *BMC Nursing*, 24(1). <https://doi.org/10.1186/s12912-025-02765-y>