

The relationship between self-efficacy and emotional burnout levels of seafarers: the role of individual alienation – the case of Turkey

Fetullah Battal and İbrahim Durmuş
Bayburt University, Bayburt, Turkey, and
Ertuğrul Çınar

Zonguldak Bülent Ecevit University, Zonguldak, Turkey

Abstract

Purpose – The study aims to examine the factors that may affect the burnout levels of ship workers.

Design/methodology/approach – The scope of the research consists of seafarers on ships docking at the ports of Zonguldak, Karadeniz Ereğli, Eren and Filyos in the Western Black Sea region of Turkey. The sample consists of officers, engineers, dynamic position operators, electricians, boatswains, able seamans, pumpmains and stewards working on ships. In this respect, a random questionnaire was used in the research method and a questionnaire was sent to 400 of these employees, representing the main sample, and 263 of them fully answered the online questionnaire.

Findings – As a result of the research, first of all, it is seen that the increase in the self-efficacy of the seafarers decreases their emotional burnout levels. In the second step, the strong self-efficacy of the seafarers reduced the level of individual alienation. In the third step, the increase in the individual alienation of the ship workers also caused an increase in the levels of emotional exhaustion.

Originality/value – As a result, it has been seen that there is a partial mediating role of individual alienation in the relationship between the self-efficacy of the seafarers and their emotional exhaustion. In other words, high self-efficacy is not the only reason for the decrease in emotional burnout levels among seafarers. At the same time, self-efficacy has an effect on the individual alienation levels of seafarers.

Keywords Self-efficacy, Emotional burnout level, Organizational alienation

Paper type Research paper

1. Introduction

From the traditional point of view, burnout is a problem for the employee (Turan *et al.*, 2021). One of the burnout situations that can cause this problem is operating at sea for months (Uğurlu *et al.*, 2021). Activities in the marine environment expose workers to stress and health hazards. The events in this environment and the negativity of the job characteristics can cause deterioration of the mental health of seafarers (Nittari *et al.*, 2022). In this respect, there is a difficult balance between fatigue and job performance for seafarers (Islam *et al.*, 2022). Employees who are mentally exhausted may become alienated from their organization. Whether employees have self-efficacy or not can also affect their burnout levels. Such challenging work environments expose employees to burnout. The level of self-efficacy of employees and their alienation from their organization can also have a significant impact on their burnout behavior.

Self-efficacy reflects an individual's response to a specific task (Yu, 2020). Employees' lack of social interaction with their colleagues at work and the idea that their personal time is



limited can cause burnout. In addition, the lack of opportunities for cooperation and teamwork with employees leads to organizational alienation behavior (Mahmoud *et al.*, 2024). Employee burnout can be evaluated as a psychological process and as an attitudinal and emotional reaction that occurs as a result of personal experiences related to work (Jackson and Schuler, 1983). Seafarers' emotional exhaustion may increase depending on their professional burnout. This situation may reduce work efficiency and may also cause employees to leave the profession (Dolu *et al.*, 2023). There may be many factors that can increase the emotional burnout of shipworkers. In addition to professional deformation, factors such as feeling alien to the environment in which they work and their underdeveloped sense of self-efficacy may affect this situation. Limited social activities in employees' environments may also increase their emotional burnout. In this respect, the level of burnout can be evaluated within the framework of seafarers' self-sufficiency in organizational activities and their attitudinal and emotional alienation from their organizations. In this research, one of the most important factors that supports emotional exhaustion may be the level of individual alienation. Additionally, individuals who do not have sufficient self-efficacy may exhibit more emotional exhaustion. Focusing on the emotional burnout of seafarers in the research is related to what the psychological and behavioral factors that are missing in the literature might be. It is aimed at bringing new perspectives to the literature on the relationships between self-efficacy, alienation and emotional burnout dimensions.

Research has not been found in the literature revealing the direct effects of self-efficacy and alienation behaviors of seafarers on their burnout. Research has not placed much emphasis on the self-efficacy of seafarers, especially in this relationship. This situation will contribute to filling an important gap in the literature. Hierarchical factors such as status differences among seafarers may be effective in reducing organizational alienation and feelings of burnout. In the literature, Karger (1981) has emphasized the relationship between alienation and burnout and stated that the difference in status in the organization is contrary to collective action and therefore causes alienation and abnormal conditions among employees cause burnout. Maricutoiu *et al.* (2016) have emphasized that there are workplace stressors that trigger employee burnout, and employee organizational alienation is also a source of stress. This shows that alienation may have an impact on burnout. Camadan *et al.* (2017) have revealed that the self-efficacy of psychological counselors and burnout are highly positively related to alienation. Salazar *et al.* (2019) have emphasized that burnout and stress levels affect the psychological states of seafarers in their working environments and that working with individuals from different cultures increases their feelings of alienation. Purba *et al.* (2020) stated that long-term productivity can be achieved by increasing the self-efficacy of seafarers. Considering the studies in the literature that reveal relationships with different variables for seafarers, it can be stated that effective relationships between self-efficacy, organizational alienation and burnout levels of seafarers can be revealed.

The relationships of individuals with their jobs and the hitches in these relationships are considered an important phenomenon of the modern world. In this respect, it is stated that the concept of burnout began to emerge among employees in the USA in the 1970s (Maslach *et al.*, 2001). Considering that burnout can exist in almost all organizations, it is understood that this concept can be quite effective in very wide areas. The organizational activities of employees in different professions may have different effects on burnout levels. This situation can be experienced more intensely, especially for those who work on international commercial ships. Especially long-term voyages, a working life away from the family (close environment) and social environment and difficulties in the workplace necessitate the research of the feeling of burnout.

Organizations are constantly changing. Factors such as cultural differences, new technologies, employee needs and values are involved in these changes (Rodriguez-Carvajal *et al.*, 2010). Depending on these changes, the expectations of the employees in their organizations may also differ. As meeting the expectations of the employees in their

organizations will satisfy them, this situation will also decrease their probability of exhibiting burnout behavior. As long as the employees are satisfied, their positive psychological capital will be at high levels in their organizational activities. In this case, it will not be possible for the employee to exhibit alienation behavior from the organization. However, in addition to changes in organizations, employee demands can also change over time. The dissatisfaction of the employee due to this change will increase both his burnout and the level of organizational alienation. In such an environment, the positive psychological capital of the employee may remain at low levels. Especially long-term voyages of individuals working on international commercial ships may cause burnout and organizational alienation behavior in them. Factors such as the income earned by the employees in these commercial activities, different country experiences, different cultural and work experiences and different working environments can contribute to their positive psychological capital.

There may be many factors that can affect the burnout levels of seafarers. In addition to the stress caused by being away from their families for a long time, restrictions on the social lives of individuals, working conditions, games, entertainment, wages and social relationships have an impact on the burnout levels of seafarers. In the literature, [Oldenburg et al. \(2013\)](#) have stated that burnout among seafarers is a gradual process that occurs over a long period of time. [Chung et al. \(2017\)](#) have revealed that there are strong relationships between the individual burnout of seafarers and their job burnout. [Patchiappane and Rengamani \(2017\)](#) have revealed that among the factors affecting the burnout of Indian seafarers, negative human resource practices, work–life integration, employment type, poor working conditions on the ship and a high workload are effective. [Tavacioglu et al. \(2019\)](#) have stated that factors that cause stress increase the burnout tendencies of seafarers. [Ugurlu et al. \(2021\)](#) found that the mental health of seafarers affects their burnout, and they stated that the working environment, wages and working hours should be improved in order to improve their feelings positively about their jobs. [Toygar et al. \(2023\)](#) have emphasized that the obligation of seafarers to work on the ships for long time periods may prevent them from fulfilling their responsibilities toward their families, and that work–family conflict causes burnout.

Burnout in organizations can affect individuals physiologically, psychologically or behaviorally ([Miller et al., 1990](#)). Working environments in the maritime industry are at high risk of accidents and disasters ([Bergheim et al., 2015](#)). This situation may have negative effects on both shipworkers' workplace activities and their working environment (in terms of their personal and social relations). There are many factors that can affect the burnout of employees in organizations. This research was designed to reveal the behavioral and psychological effects of positive psychological capital and organizational alienation levels on the burnout of shipworkers in their activities in the organization. In this context, the employees working on international commercial ships were taken into account.

In the research problem, the focus is on the burnout of the employees working on international ships in the maritime sector. In this context, the concepts of self-efficacy and organizational alienation, which are thought to affect the burnout of employees, are examined. The results of the research may reveal important results for those operating on national and international ships (in terms of managers, bosses and employees) and other stakeholders (those operating in the sector). Clarifying the concepts of burnout, self-efficacy and organizational alienation can be a source for those operating in the maritime sector.

Self-efficacy is included in the ability to self-regulate of an individual ([Soelton et al., 2020](#)). Individuals' perceived self-efficacy influences the selection of behavioral environments. In this respect, if people's ability to cope with threatening situations is low, fear and avoidance are observed. However, they exhibit participation and confident behavior when they think they have the capacity to cope ([Bandura, 1977](#)). These explanations show that organizational alienation and emotional burnout may be at lower levels in individuals who have self-efficacy.

Unfair treatment and explanations in organizations cause employees to feel isolated from the environment and relationships in which they work (Ceylan and Sulu, 2011). Psychological alienation is about the individual feeling disconnected from his job, duties and responsibilities. In this case, there is a reluctance to establish and maintain social relationships (Farahbakhsh *et al.*, 2020). Rowe *et al.* (2020) stated that alienation results in false consciousness, ignorance, and negative consequences for people. Haga (2022) emphasized that alienation increases with the introduction of new technologies in organizations. Weak relationships in the work environment can prevent the functionality of activities. This situation leads to individual alienation of the employee and disruption of business activities. The negative consequences of alienation may cause disruption of business activities and communication between employees.

While emotional burnout has a balancing feature, on the other hand, it is a result of stress resulting from mental disharmony (Voitenko *et al.*, 2021). Reducing the negative consequences of emotional burnout is a positive outcome for both employees and management (Lambert *et al.*, 2015). In this respect, long-term workload, which can lead to emotional exhaustion of employees, can cause mental disharmony and stress and therefore emotional exhaustion. The probability of exhibiting emotional burnout behavior is quite high in ship workers who require long-term voyages.

The general structure of the article consists of a conceptual framework related to research variables (employee burnout, self-efficacy and organizational alienation), the development of research hypotheses, methods, research universe and sample, scales used, demographic information, factor analysis, validity and reliability analysis, testing research hypotheses and discussion and results sections. The general structure of the article comprises research variables such as employee burnout, self-efficacy and organizational alienation, the method, the research universe and the sample, the scales used, demographic information, factor analysis, validity and reliability analysis, testing of research hypotheses and discussion and conclusion parts.

2. Literature

2.1 Employee burnout

Individuals may have high goals and expectations for the profession they have chosen. When these hopes (expectations and goals) are not realized, burnout occurs. The main reason for burnout is the job characteristics that prevent the employee from reaching his goals and hopes (Pines, 2002). In this burnout situation, employees become pessimistic and may exhibit anti-social behaviors (Avtgis *et al.*, 2007). In this respect, the outcomes obtained or not obtained from the employees as a result of their work-related activities can shape their burnout behaviors.

In the literature, it is stated that the environmental or organizational factors associated with burnout include excessive workload, role ambiguity, role conflict, work environment and management support (Brewer and Shapard, 2004). In addition to these variables, the alienation of employees from their organizations and their positive psychological capital may be effective in reducing burnout levels. While the burnout level of an employee who is alienated from his organization will increase, the burnout level of an employee with positive psychology will decrease.

2.2 Self-efficacy

Complex tasks in organizations lead to the development of strategies with a high level of self-efficacy. Self-efficacy contributes to collecting information about employees, making the right decision and performing appropriate activities when there is time pressure in the organization (Heslin and Klehe, 2006). This situation shows that self-efficacy is an effective function in organizational activities.

In the literature, it is observed that self-efficacy is one of the factors that create positive psychological capital. This may be related to how the employee working in the organization

can develop himself in a positive way. According to [Luthans et al. \(2007\)](#), positive psychological capital can bring a positive perspective to negative aspects of the workplace, such as unproductive organizational structures, stress, conflicts, aggression, dysfunctional employees, unethical behaviors and ineffective strategies. Positive psychology has promoted two styles of management practices in an organization, based on positivity and power. In the first practice, positive organizational features are taken into account in order to increase the survival and effectiveness of the organization in times of crisis and adverse conditions. In the second practice, positive organizational behaviors that reveal human resource power are measured, developed and managed for performance improvement in the organization, and psychological capacities are examined ([Luthans and Youssef, 2004](#)).

2.3 Organizational alienation

Alienation is based on sociology and focuses on the feelings of powerlessness and meaninglessness in individuals, the inability to contribute to the individual's life and happiness and the inability to understand them ([Hofstede, 1976](#)). In alienation, the reactional abilities of an individual and the results of his actions are effective ([Seeman, 1975](#)). In this respect, there are negative factors in alienation, where an employee evaluates his job as meaningless, dislikes his job and has no expectations for the future ([Yurdakul and Öneren, 2021](#)). These negative effects can be reflected in the organizational activities of an employee. In particular, employees' feelings of not belonging to their job or organization may prevent them from focusing on their activities.

The fact that employees can move freely in their organizations and take more initiative and responsibility will significantly reduce their feelings of alienation ([Nightingale and Toulouse, 1978](#)). When this situation is evaluated, especially in terms of ship workers, having a positive psychology in which they can act freely will increase their loyalty to their organizations. As a result, the overall positive structure of an organization will limit the alienation of an employee from the organization.

3. Method

The research data were obtained using a primary quantitative data technique, and the cross-sectional results were analyzed. The purpose of this application is to collect and evaluate data specific to the study. In the method section of the study, the survey technique was used by considering the random sampling method. The focus of the research is seafarers working in the Black Sea region of Turkey. At the same time, the model, scales, analysis and findings will be included in this section.

In terms of its methodological framework, the research consists of seafarers working in ports in the Western Black Sea region of Turkey. The fact that no such research has been found before on relevant employees in this region shows that the research has a very innovative structure. The fact that seafarers perform different tasks together (within the same ship) may affect their perceptions of self-efficacy, alienation and emotional exhaustion.

Studies in similar and different fields in the literature were examined, and hypotheses regarding the variables were developed. In addition to the research stated in the theoretical part of the research; [Yıldırım \(2015\)](#) revealed that there is a negative relationship between individuals' self-efficacy perceptions and professional burnout, [Yurt \(2022\)](#) revealed that self-efficacy negatively affects burnout and [Zhou \(2022\)](#) revealed that self-efficacy negatively affects the relationship between emotional exhaustion and information retention. Taking into account the research results, the H1 hypothesis was developed. [Zhang et al. \(2017\)](#) stated that self-efficacy has negative relationships with the feeling of alienation. [Khayyat and Mousa \(2022\)](#) revealed that there is a negative relationship between individuals' self-efficacy and

alienation behaviors. Considering the results, the H2 hypothesis was developed. Khan *et al.* (2019) revealed that individuals' alienation from their jobs increases emotional exhaustion. Taking this situation into consideration, the H3 hypothesis was developed. Considering the studies mentioned above and in the literature section, it is thought that organizational alienation may have a mediating role in the self-efficacy and emotional burnout relationship. In this respect, the H4 hypothesis was developed. It is estimated that the results can make significant contributions to the literature, especially for seafarers. The following hypotheses were developed, taking into account the research and explanations expressed in the literature (see Figure 1).

The hypotheses of the research are as follows:

- H1. Self-efficacy of ship workers will reduce their burnout levels.
- H2. Self-efficacy of ship workers will reduce their organizational alienation levels.
- H3. Organizational alienation of ship workers will increase their burnout levels.
- H4. The level of organizational alienation will have a mediating effect on the relationship between self-efficacy and burnout levels of ship workers.

The significance test of the correlation coefficient in the Spearman rank correlation method can be evaluated by the sample size in terms of both parametric and nonparametric data. If the sample is small, the correlation coefficient must be large (-1 or close to 1) to ensure correlation significance. If the sample is large, the correlation may be significant even if the correlation coefficient value is close to zero. The fact that the correlation coefficients are significant indicates that there are strong linear relationships between the variables (Sedgwick, 2014). As a result of the analysis, it was seen that a sufficient sample was provided and significant correlation relationships were revealed.

3.1 Universe, population and ethics committee permission

The aim of the study was to reveal the effect of the perceived positive psychological capital levels of seafarers on their feelings of burnout. In addition, another aim of the study is to reveal what kind of effect the alienation levels of the seafarers have on the relationship between positive psychological capital and burnout levels. A questionnaire technique was used in this study. Ethics Committee Approval was given by the Bayburt University Scientific Research Ethics Committee with decision no. 77 dated 25.02.2022, for the use of the questionnaire form in the study. The universe of the research consists of seafarers on ships docking at the ports of Zonguldak, Karadeniz Ereğli, Eren and Filyos in the Western Black Sea region of Turkey. The sample consists of officers, engineers, dynamic position operators, electricians, boatswains, able seamans, pumpmans and stewards working on these ships. According to the research, it is known that approximately 800 seafarers visit the above-mentioned ports on a monthly basis. According to this, the number of 263 participants has reached the 95% confidence level and 5% confidence interval representing the population (Etikarastirma.com, 2022).

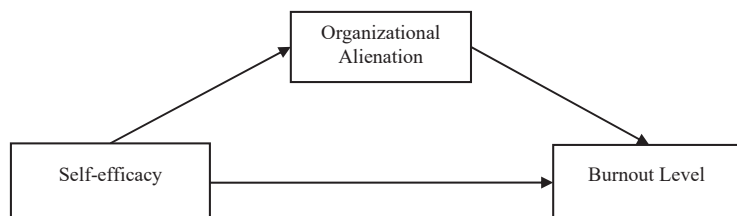


Figure 1.
Research model

3.2 Analysis

Structural equation modeling (SEM), which is frequently used by scientists in many different fields such as social sciences, behavioral sciences, educational sciences, economics and medical sciences (Bentler and Yuan, 1999; Raykov and Marcoulides, 2006) based on a certain theoretical basis (Jöreskog and Sörbom, 1993), is used to test the relationships between observed and latent variables (Leech *et al.*, 2005). In this study, the original Analysis of Moment Structures (AMOS) package program was used to calculate the structural equation models. Related analyzes and findings are presented below.

As a result of these analyzes, the items with a standardized coefficient above (0.50), in other words, the items that meet the necessary conditions, were included in the analysis, while the factors below this condition were removed, starting with the weak one, and the analysis was repeated. After the indices of the confirmatory factor analysis (CFA) analyzes became appropriate, in order to reveal the direction and severity of the relationship between the scales, in the first step a normality test was performed with the help of the SPSS program, and then the Spearman test correlation test was applied to the data that did not show normal tendency (Heiman, 2013).

4. Findings

4.1 Demographic findings

A total of 263 ship employees participated in the research. According to this, the majority of the ship's employees are 35 years old and under, with 77.1%. For this reason, it is evident that the seafarers are mostly composed of young people. About 72.2% of seafarers are male and 27.3% are female. According to their graduation status, it is seen that their education is mostly at the high school level, with 4.3%. The least level of education is seen as postgraduate, with 2.7%. Considering the experience of the seafarers, it is seen that it is 34.2% between 1 and 5 years at the most, while it is seen that the minimum employee experience is 9.1% for 16–20 years. In other words, while seafarers prefer to serve in this field at a young age, they do not prefer to work in this field in later periods. In addition, it is revealed that there is a harmony between the ages and experiences of the employees.

4.2 Scales used in the research

When the scales of the research are examined, the first scale is the positive psychological capital of employees scale, which was originally prepared by Luthans *et al.* (2007). This scale basically consists of 24 questions based on the dimensions of self-efficacy, hope, optimism and resilience. In this study, the self-efficacy dimension, consisting of eight questions related to the subject, was used (Luthans *et al.*, 2007). There are validity and reliability analyzes of the psychological capital scale in our country (Boyas and Wind, 2010; Luthans and Youssef-Morgan, 2017). The second scale of the study was used to measure the level of emotional burnout compared to the original one developed by Maslach and Jackson (1981) and a one-dimensional scale consisting of nine questions adapted to Turkish by Ergin (1992). Considering the last scale used in the study, the Mottaz three-dimensional alienation scale was taken into consideration and the self-alienation dimension, consisting of seven questions considered suitable for the study, was used (Mottaz, 1981). In addition, its Turkish adaptation was made by Uysal (2010).

Researchers can follow two ways in order to obtain data with the help of questionnaires. The first of these is the researchers' arrangement of a new survey on the relevant subject. To do this, researchers first need to conduct pilot studies and related studies together with explanatory factor analysis. In the second method, researchers can use the original scales related to the subject. In this study, as stated above, original questionnaires were preferred. For this reason, both the loss of time and the analysis of the data were obtained without the need for a pilot study and explanatory factor analysis (Büyükoztürk, 2002).

4.3 Factor analysis findings related to the scales

It is seen that all of the research scales have Turkish adaptations. For this reason, confirmatory factor analyzes of the related scales used in this study were performed with the help of the AMOS program. In the first step, the self-efficacy dimension, consisting of eight statements belonging to the positive psychological capital scale, was examined. The findings of the CFA are given in Table 2. The reliability of the scales used in the research must be over 0.70 (Kartal and Dirlik, 2016; Hair et al., 2017). Considering the Cronbach's alpha level of the scale used in the study, it was found to be reliable at the level of (0.829). In addition, each expression of the scale must be at or above 0.50 in order to carry out CFA analysis (Yaşoğlu, 2017). In other words, it is a situation where the power of representation among the factors is at least 50%. In explanatory factor analysis, the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy) value, which indicates the suitability of the data for factor analysis, should be greater than 0.60, and the degree of sphericity (Bartlett's test of sphericity), which indicates that meaningful factors will emerge from the data obtained, should be 000. Care was taken to ensure that the factor loadings were not below 0.40 in the explanatory factor analysis and 0.50 in the confirmatory factor analysis. Considering all the scales in the study together, it was seen that the sample was large enough for analysis because the KMO value (0.887) and the sphericity test ratio (0.000) met the necessary criteria (Tobias and Carlson, 1969).

Each expression below this ratio should be discarded according to AMOS recommendations, starting with the smallest or most necessary modifications. As a result of the CFA analysis, all expressions related to the self-efficacy scale were above the 0.50 factor load; however, modification suggestions were observed. Accordingly, the situation before and after CFA is shown in Figure 2 below. Based on the explanations above, the necessary corrections to the self-efficacy scale discussed in the study and the standardized regression coefficient values are shown in Figure 2:

The second scale discussed in the study is the emotional burnout scale. This scale consists of one dimension and nine statements. CFA was applied for the second scale, as stated above. Based on these findings, the factor loads of the burnout scale were examined first. At this point, since it was seen that no question was below the 0.50 level, necessary modifications were made based on AMOS recommendations. Thus, the relevant CFA was performed, and the results are shown in Figure 3 below.

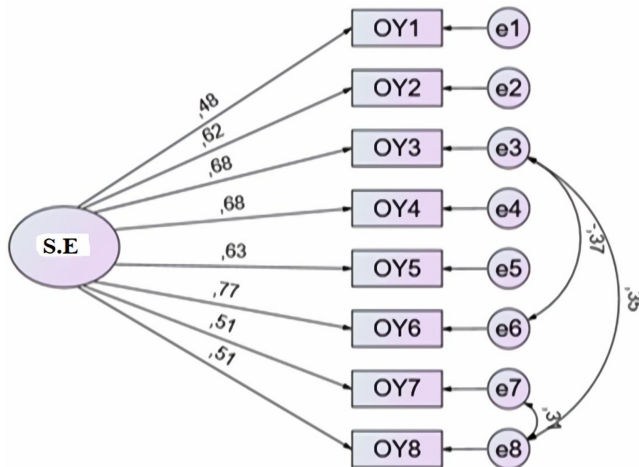


Figure 2.
CFA on self-efficacy

According to the emotional burnout scale, which was outside of the acceptable adjustment before the modification, it was between the acceptable values after the necessary modifications applied. Then, CFA was made again, as shown in Figure 3:

For the self-alienation scale, which is the last scale used in the study and consists of seven statements, CFA was performed. Accordingly, when the standardized regression coefficients were examined, it was observed that there was no factor load lower than 0.50 in any of the expressions belonging to the scale. CFA was repeated, and the modifications suggested by the AMOS program were made. Results and findings are shown together in Figure 4:

The validity and reliability values of the study are as follows:

KMO sample adequacy measurement was performed to statistically test the validity of the sample size after the application. KMO value, which can take a value between 0 and 1; Between 0.5 and 0.7 is interpreted as normal, between 0.7 and 0.8 as good, between 0.8 and 0.9 as very good, and above 0.9 as excellent (Field, 2005). The overall KMO level for the scale of this study was found to be 0.84. From this point of view, it is possible to say that the seafarers participating in the study provided a sufficient number of participants and the results were consistent. In addition, a significant Bartlett's sphericity test is interpreted as indicating that

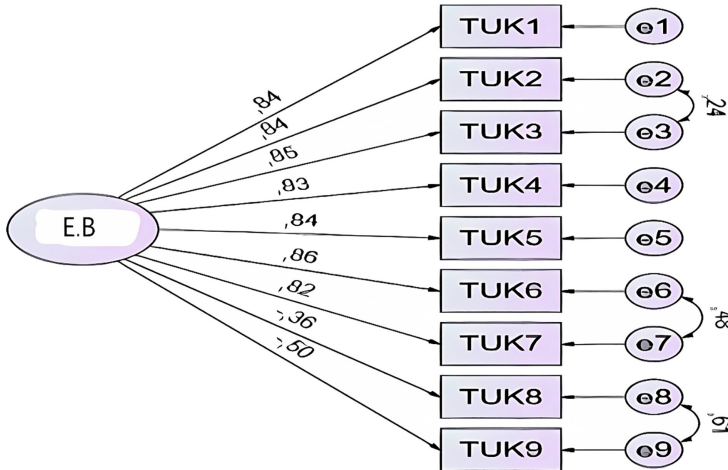


Figure 3.
CFA on the emotional
burnout scale

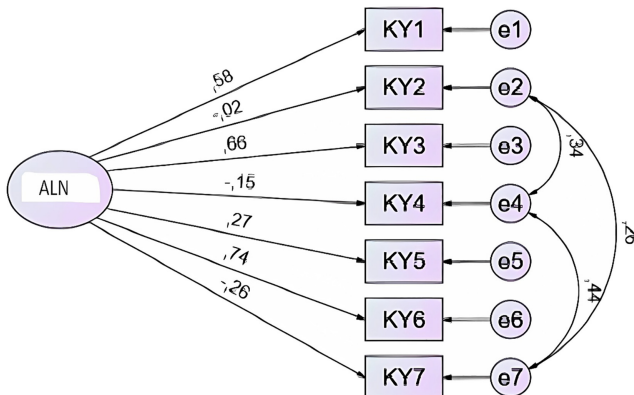


Figure 4.
CFA on the self-
alienation scale

the sample size is sufficient for factor analysis and the correlation matrix is appropriate (Büyükoztürk, 2002). According to Table 1, all criteria meet the recommended levels; furthermore, all CRs exceed 0.7 and all AVEs exceed 0.5. This shows that the structure has passed the reliability and validity tests (Chang et al., 2022). Additionally, the fact all scales are greater than 0.7 reveals that the scales of the variables are reliable (Taber, 2018).

4.4 Testing hypotheses

In order to reveal the direction and severity of the hypotheses, first of all, a correlation analysis was performed. According to this analysis, the relationships between self-efficacy, emotional burnout and self-alienation levels were examined. Since it was observed through the histogram and leaf tests that the data were not normally distributed, the Spearman correlation method was used to address the relationship between the scales. Accordingly, the relationship between the scales is given in Table 2.

According to Table 2, it is seen that the seafarers generally feel themselves emotionally efficient (mean = 4.786). In addition, it is seen that the emotional burnout levels (mean = 2.125) and self-alienation levels (mean = 2.202) of the ship workers are low accordingly.

According to Table 2, firstly, $r = -0.235$ was a weak (negative) and significant level between the perceived self-efficacy levels of the seafarers and their emotional burnout and $r = -0.632$ strong level between the self-efficacy levels and their alienation levels. It is seen that there is a (negative) and significant relationship. Finally, it was seen that there was a weak (positive) and significant correlation at a 95% significance level between the emotional burnout levels of the seafarers and their alienation levels. From this point of view, as the level of self-efficacy of the seafarers increases, their perceived emotional burnout and self-alienation levels will decrease. In other words, strengthening the efficacy levels of seafarers will protect them against emotional burnout and self-alienation.

Before the model test, it was checked whether there was a multicollinearity problem between the independent variables by keeping the dependent variable constant (emotional burnout level). For this reason, variance inflation factors (VIF) and tolerance values have been revealed. The results regarding the VIF and tolerance values of the study are shown. VIF values are below 10 and tolerance values are above 0.10. Based on these findings, it can be said that there is no multicollinearity problem in the research.

Table 1.
Results of reliability
and validity tests

| Concept | Cronbach's alpha recommended level > 0.7 | Average variance extracted (AVE) recommended level > 0.5 | Composite reliability (CR) recommended level > 0.7 |
|----------------------|---|---|---|
| Self-efficacy | 0.829 | 0.608 | 0.710 |
| Emotional burnout | 0.888 | 0.649 | 0.905 |
| Self- alienation | 0.840 | 0.512 | 0.867 |

Source(s): Table by authors

Table 2.
Correlation analysis
between variables

| Index | X | SS | 1 | 2 | 3 |
|-------------------|-------|------|----------|--------|---|
| Self-efficacy | 4.786 | 1.89 | 1 | | |
| Emotional burnout | 2.125 | 1.74 | -0.235** | 1 | |
| Self-alienation | 2.202 | 1.52 | -0.632** | 0.405* | 1 |

Note(s): $p < 0.01$ **, $p < 0.05$ *
Source(s): Table by authors

Considering the other findings and analyzes obtained in the research, the basic model was designed according to the necessary literature and mathematical theory, based on the CFA analyzes obtained in the first step (Bayram, 2010). In addition, the bootstrap method (data augmentation) was included in the SEM and the direct and indirect relations between the scales were examined, together with the calculation of the largest and smallest intervals of the data that were not normally distributed. Since it is known that the data do not show a normal distribution, in this part of the study, in addition to the correlation analysis, it was evaluated whether there was a multicollinearity problem between the variables by looking at the VIF and tolerance values. In order to avoid a multicollinearity problem, correlation results should be less than 0.80 and VIF and tolerance values should be $VIF \leq 10$ and tolerance ≥ 0.10 when variance amplification factors (VIF) and tolerance values are calculated (Albayrak, 2012). From this point of view, the hypotheses of VIF and tolerance values were put forward and tested in this way. According to the findings, it was observed that the VIF values were below 10 and the tolerance values were above 0.10. In this respect, it is possible to say that there is no multicollinearity problem in the research.

After discussing the correlational connections between the variables in the research, the relations between the hypotheses were examined. Accordingly, emotional burnout is exogenous (external); self-efficacy and self-alienation are endogenous (internal) variables. Another way to determine whether the indirect effect of the independent variable on the dependent variable with the effect of the mediator variable is significant is the Sobel test (Sobel, 1982). This test was calculated using the standard error values of the relevant variables and the uncorrected regression coefficients (β). However, the calculation of these tests is frequently made with the bootstrap method in the confidence intervals of -1 and $+1$. This method prevents the p value from being the only constraint in structural equation models. Thus, by testing the direct and indirect effects of all variables at certain confidence intervals, the mediation effect of increasing or decreasing can be revealed more clearly (Bayram, 2010). CFA tests the reliability and dimensional validity of the scales. Actually, there are various indices that show the goodness of fit, including chi-square/df, goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI), normalized fit index (NFI), root mean residual (RMR) and root mean square error approximation (RMSEA).

These criteria are given in many studies (Battal and Ibrahim, 2023). The general model of this study was tested, and these values were, respectively; chi-square/df is $241.156/83 = 2.905$; GFI value is 0.912 (higher than 0.9); AGFI value is 0.874 (higher than 0.8); CFI value is 0.924, NFI value is 0.945; RMR value is 0.041 (all lower than 0.1) and RMSEA value is 0.073 (lower than 0.08). According to these data, it can be seen that the fit index values of the general model of the study are at an acceptable level. General data for the model are shown in Figure 5:

Looking at Figure 5, the final state of the basic model analyzed by the AMOS program is seen. Accordingly, the GFI values of the scale were examined. A question or modification has not been made at this point because it was observed that the model's goodness-of-fit values were at an acceptable level. The levels of the standardized regression coefficients of the general model according to the bootstrap method are discussed in Table 3:

Considering the findings of Table 3, it was observed that the level of self-efficacy perceived by the seafarers affected the emotional burnout level negatively (-0.172) and significantly ($p \leq 0.05$). Therefore, it is seen that H1 will be accepted. Based on this result, it is seen that as the self-efficacy of the seafarers increases, the probability of losing themselves to the feeling of burnout will decrease. In other words, it can be said that employees with high self-efficacy feel better.

According to Table 3, it was observed that there was a negative (-0.237) and a significant ($p \leq 0.05$) effect between the self-efficacy levels and self-alienation levels of the seafarers. According to this result, it appears that the H2 hypothesis can be accepted. As the self-efficacy levels of seafarers increase, their self-alienation will decrease. In other words, it is

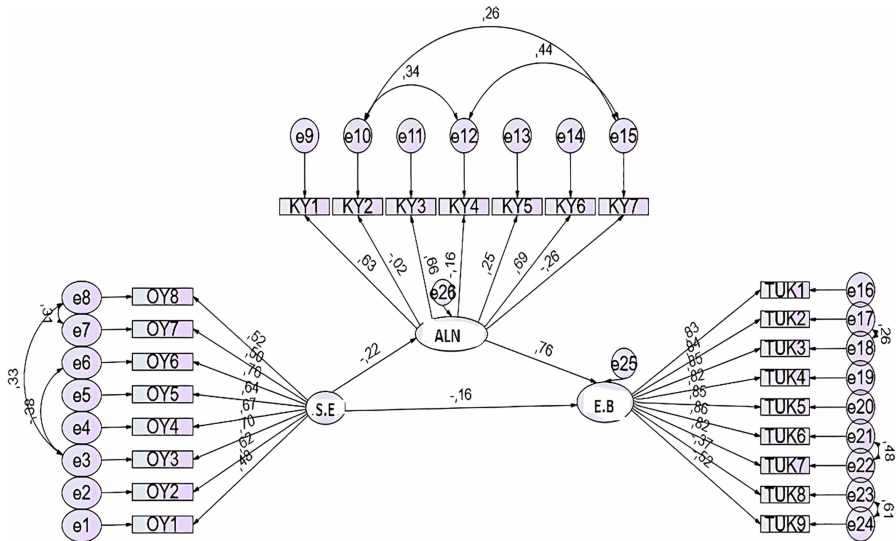


Figure 5.
Standardized
estimation model result
on the model

Note(s): Self-Efficacy = SE, Emotional Butnout = EB, Alienation = ALN

Table 3.
Estimation results of
the model

| Hypothesis | Dependent variable | Independent variable | Standardized R. Y | Low level | Top level | p |
|------------|--------------------|----------------------|-------------------|-----------|-----------|-------|
| H1 | EB | ← SE | -0.172 | -0.425 | -0.143 | 0.003 |
| H2 | ALN | ← SE | -0.237 | -0.377 | -0.206 | 0.009 |
| H3 | EB | ← ALN | 0.764 | 0.368 | 0.862 | 0.002 |

Source(s): Table by authors

necessary to increase the self-efficacy of employees in order to prevent their alienation from the organization and themselves.

Looking at the last of the direct hypotheses (H3) from Table 3, it is seen that the relationship between self-alienation and emotional burnout has a positive (0.764) and significant ($p \leq 0.05$) effect. According to this result, the increase in the level of alienation among seafarers consumes them emotionally. This relationship is based on very strong standardized regression, as seen above. Therefore, the alienation of employees should not be allowed within the organization. Based on this result, the H3 hypothesis was accepted.

Finally, the mediating role of self-alienation in the effect of seafarers' self-efficacy levels on emotional burnout levels was examined in the study. In order to examine this hypothesis (Baron and Kenny, 1986), the theoretical road model was taken into account. For this reason, self-alienation, which is a mediating variable, was not included in this model. Afterwards, fit indices and estimation results are given according to Figure 5 above, in which self-alienation is included in the model.

Looking at the fit values in Figure 6 above, it is seen that the measurement model values are at an acceptable level of fit. The standardized regression coefficients of the SEM analysis performed to determine the mediator role of self-alienation in the effect of self-efficacy on emotional burnout in the study are given in Table 4.

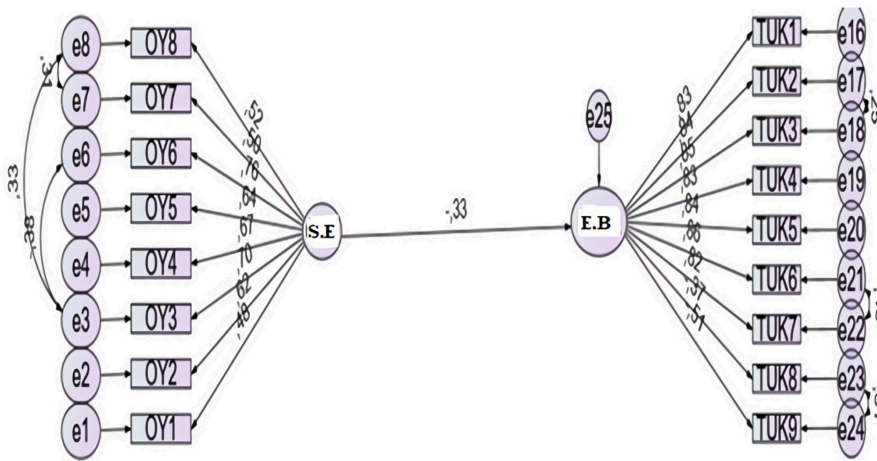


Figure 6.
The relationship
between self-efficacy
(SE) and emotional
burnout (EB) levels

| Dependent variable | Independent variable | Standardized R. Y | Low level | Top level | <i>p</i> |
|--------------------|----------------------|--------------------------|------------------------|------------------|----------|
| EB | ←SE | -0.334 | -0.417 | -0.254 | 0.002 |
| Hypothesis | Relationship | Unmediated direct effect | Mediated direct effect | Indirect effect | <i>p</i> |
| H4 | SE-ALN-EB | -0.334 | -0.162 | Partial Mediator | 0.002 |

Source(s): Table by authors

Table 4.
Standardized
regression coefficient
levels of the
unmediated model

According to Table 4, when self-alienation is removed from the model, it causes a moderate (-0.332) and significant ($p \leq 0.05$) change in the relationship between seafarers' self-efficacy and emotional burnout. To test the last hypothesis (H4), see Figure 5. The situation of self-alienation, which was included in the model as a mediator variable, was examined, and the results were obtained according to Table 4 below.

In order to reveal the mediating role of the level of self-alienation in the relationship between self-efficacy and emotional burnout, firstly, the variable of self-alienation was removed from the model as described above. At this point, a direct effect has been identified. In the next step, the mediating variable, self-alienation, was added to the model, and the analysis was repeated. According to the findings obtained, it was observed that the self-efficacy of the employees affected their burnout levels negatively and alienation, which was a mediating effect, changed this effect ($\beta = -0.162$ and $p \leq 0.05$). Based on these results, it can be said that there is a partial mediation effect due to the change in the relationship between self-efficacy and emotional burnout. In other words, although there is a direct relationship between the level of self-efficacy and emotional burnout, there is a relationship level stemming from self-alienation. Accordingly, the (H4) hypothesis was also accepted.

5. Discussion (evaluation according to national and international culture)

In the selection of the research topic, especially the studies conducted in the last 10 years were examined. The reason for this is to be able to handle the current results and interpret the results. In the first step, the basic model of the study was revealed. Accordingly, it is seen that

some studies have directly examined the relationship between the levels of perceived self-efficacy by the employees, the relationship between the levels of emotional burnout and the levels of self-efficacy and alienation of the employees (Sobel, 1982; Baron and Kenny, 1986; Field, 2005; Leech *et al.*, 2005; Bayram, 2010; Yaşhoğlu, 2017; Hair *et al.*, 2019; Yılmaz and Kınaş, 2020).

Looking at the research findings, firstly, the analysis of demographic data were discussed. Accordingly, it has been observed that the majority of the seafarers are men, and their age is below 35 years. Considering their educational status, it is evident that they are generally at the high school level. However, it has been revealed that while working experiences are generally up to 1–5 years, there is no longer-term work. This may be due to the strenuous and difficult conditions of ship operations.

It is accepted that the demographic findings were made in order to understand the content of the study. Despite this, it is a fact that the data obtained cannot be interpreted solely on the basis of demographic findings. For this reason, confirmatory factor analyzes were applied to the relevant scales in the study. While performing CFA with the help of the AMOS program, scales whose validity and reliability were applied in Turkey were used. These scales were adapted according to the subject of the study, and their relevant dimensions were used.

Analyzing similar studies on seafarers, it has been seen that seafarers with high marital satisfaction have lower levels of stress and anxiety than others (Peplińska *et al.*, 2013). Another study investigating seafarers and work-related stress was conducted by Jezewska *et al.* According to the study, the most common psychosocial stress factors are monotony, loss of attention, biorhythm disorders, excessive or insufficient responsibility, alienation, being away from the family, constant change in the environment and conflict and responsibility for the safety of the personnel (Jezewska *et al.*, 2006).

Another of the limited publications on the subject in the literature was conducted by Borovnik. He stated that increasing pressure over time and being away from family and work stress have effects on the emotional health of seafarers, and occupational stress is higher on ships in terms of physical. He also stated that working on ships has two main factors related to health and safety. These are occupational factors that can be defined, such as the type of ship, the department worked in, the movements of the ship and social factors based on emotional stress that cause working in a limited area on the ship, being away from family, loneliness and longing (Borovnik, 2011).

A study was conducted by Oldenburg *et al.* on the burnout syndrome for seafarers in the foreign field literature, which is similar to this study. Oldenburg *et al.* detected emotional exhaustion in 25% of the galley staff, 10.7% of the officers and 4.7% of the staff (other than the officers) and stated that intensive and long working hours and being away from family increased emotional exhaustion. They also found that 14% of the total employees had high levels of emotional exhaustion associated with sleep disorders. An interesting finding is that the risk of burnout is reduced among officers who are with their children. On the other hand, higher burnout rates were found in seafarers working on tankers compared with those working on container and dry cargo ships (Oldenburg *et al.*, 2013).

In the literature, it is stated that positive psychological capital has positive relations with desired behaviors in the organization and negative relations with undesirable behaviors (Avey *et al.*, 2011). In this respect, the positive psychological capital of an employee in the organization can keep the burnout level low. Luthans *et al.* (2008) emphasized that positive psychological capital has positive effects on employee performance by contributing to the development of human resources. Crawford *et al.* (2010) stated that since the job demands of the employees in their organizations require a certain effort, they can affect different psychological reactions and burnout levels. According to Tavacıoğlu *et al.* (2019), it has been revealed that the increase in the happiness of Turkish ship workers at their workplaces increases their job satisfaction, which reduces their burnout. Yuen *et al.* (2020) revealed that

psychological capital reduces burnout in ship workers. [Gabriel and Aguinis \(2021\)](#) stated that the positive conditions of employees that enable them to have high energy and mental flexibility and to be enthusiastic, self-sacrificing and happy in their organizations will contribute to lower burnout levels. [Fu and Charoensukmongkol \(2022\)](#) concluded that positive psychological capital reduces employee burnout.

Positive psychological capital among employees operating in organizations can keep their alienation levels low. In the literature, [Toor and Ofori \(2010\)](#) emphasized that positive psychological capital has positive contributions to organizational and individual activities. [Aiken and Hage \(1966\)](#) emphasized that alienation can be at high levels in organizations where the employee's access to power or such freedom is restricted. They stated that alienation can also affect other aspects of organizational life. [Norman et al. \(2010\)](#) revealed that the positive psychological capital that employees put forward for their work areas leads to less deviant behavior. This shows that positive psychological capital can be effective in preventing alienation.

The alienation of an employee from the organization can trigger a level of burnout. [Murphy \(1985\)](#) stated that alienation has a depressing effect on society. [Karger \(1981\)](#), in his research emphasizing the relationship between alienation and burnout, stated that in alienation, public welfare (for society) is the subject rather than organizational activities. He emphasized that burnout is not a disorder but is similar to abnormal conditions among employees. [Oldenburg et al. \(2013\)](#) emphasized that the risk of burnout in ship workers may result from the lack of care of the ship's manager and shipping companies and from being separated from the family for a long time with high organizational responsibility. The positive psychological capital of the employee, burnout level and organizational alienation variables can be evaluated in terms of positive and negative effects. In the literature, [Youssef-Morgan and Luthans \(2013\)](#) emphasized that excessive positivity and excessive negativity in individuals can come into balance with a dynamic change in terms of positive psychological capital.

As a result of the research, it was generally seen that increasing the self-efficacy of seafarers reduced their emotional burnout levels. In the literature, [Bandura \(1977\)](#) emphasized that fear and avoidance behaviors are at lower levels in individuals with high self-efficacy and that individuals act confidently. [Yildirim \(2015\)](#) stated that there is a negative relationship between individuals' self-efficacy perceptions and professional burnout, [Yurt \(2022\)](#) stated that self-efficacy negatively affects burnout, [Zhou \(2022\)](#) stated that self-efficacy negatively affects the relationship between emotional exhaustion and information retention and [Dolu et al. \(2023\)](#) emphasized that professional burnout can increase emotional burnout. The results of the research support the conclusion that self-efficacy in seafarers reduces emotional burnout. In research, [Zhang et al. \(2017\)](#) revealed that self-efficacy has negative relationships with the feeling of alienation, and [Khayyat and Mousa \(2022\)](#) revealed that there is a negative relationship between individuals' self-efficacy and alienation behaviors. As a result of the research, the negative effect of seafarers' self-efficacies on organizational alienation supports the relevant literature. In the literature, [Khan et al. \(2019\)](#) revealed that individuals' alienation from their jobs increases emotional exhaustion. In the study, it was observed that seafarers' alienation from their organizations increased their emotional burnout. This result also supports the literature. Considering the previously mentioned studies, it has been observed that organizational alienation has a partial mediator role in the self-efficacy-emotional burnout relationship. No research on this relationship has been found in the literature. This result can make significant contributions to the literature. Studies using such variable regarding seafarers are quite limited. This situation can make serious contributions to the literature in terms of maritime and human resources.

Considering the studies available in the literature, it is possible to say that the burnout of seafarers tends to increase compared with their situation on land. At the same time, based on

the data from similar studies, it is seen that employees with high self-efficacy feel less burnout. For this reason, small and simple opportunities should be created to reduce the emotional exhaustion levels of seafarers or at least to get rid of monotony. They should also be able to communicate with their families. Thus, it is predicted that emotional burnout levels may weaken.

6. Conclusion

According to the findings obtained from the correlation analysis, it was seen that the self-efficacy averages of the employees were high, while the levels of emotional burnout and self-alienation were low. Accordingly, it can be said that the seafarers in the region where the research was conducted see themselves as sufficient. However, according to the literature, it is seen that an expected situation occurs. In other words, they revealed that their levels of alienation and emotional burnout were low.

As a result of the analysis, it was understood that seafarers' self-efficacies, alienation and burnout levels have strong relationships together. The results showed that some activities are needed to further contribute to individuals' self-efficacies and reduce levels of emotional burnout and individual alienation. Among the factors that contribute to seafarers' emotional exhaustion or feelings of individual alienation are: feeling of loneliness, being away from the family environment, limited social opportunities, harsh working conditions, lack or knowledge of a common language, cultural differences in the working environment, limited play and entertainment opportunities, material or moral concerns, security concerns and lack of communication. Minimizing these concerns through various activities or motivation can also contribute to the self-efficacy of seafarers.

Figure 5 shows the final, analyzed version of the model. From this point of view, in the first step, it is seen that there is a significant but negative relationship between the perceived self-efficacy levels of the seafarers and their level of emotional burnout. In the second step, it was revealed that there was a significant but negative effect between the perception of self-efficacy and the alienation levels of the seafarers. In the third step, it was revealed that there is a positive and significant relationship between the alienation of the seafarers and their emotional burnout levels. These three steps actually revealed that the basic and direct hypotheses of the study were confirmed. In other words, it has been observed that when seafarers feel efficient, they can reach the level of emotional burnout more difficultly. At the same time, it was observed that the level of alienation of the seafarers with high levels of efficiency decreased. Finally, it is predicted that if the level of alienation among the seafarers is high, they may feel emotionally burnout.

In the last step, the situation dealing with the mediation effect of this study was examined. According to this study, it was seen that alienation had an indirect effect on the relationship between the self-efficacy levels of seafarers and their emotional burnout levels. In other words, the relationship between employees' self-efficacies and emotional burnout levels has an effect on self-alienation levels.

According to the literature, it is possible to say that hypotheses point to similar results in the dimension of bilateral relations. However, studies that consider the indirect effect of self-alienation on the relationship between self-efficacy and emotional burnout have not been found. For this reason, it can be said that the study offers a unique value to the literature. In future studies, seafarers from different cultures can be the focus of the study. Thus, the sociocultural dimension of this model can be observed. Another suggestion is to apply the repeat-test method to seafarers at different times to ensure that the data is more reliable.

In summary, this study is an important guide that shows how employees can be aware of their self-efficacy and how they can struggle with negative situations that they may encounter in the organization or working life. Thus, employees will feel stronger emotionally

and in addition, they will be able to achieve harmony with the organization more easily. At the same time, their level of alienation from themselves will decrease. According to the last situation, the self-efficacy of the employees has vital importance in business life. Therefore, it is recommended that future managers make investments to increase the self-efficacy of employees.

The business life of seafarers requires them to face more challenging conditions than those working on land. For this reason, this situation was taken into consideration when evaluating the data of the study. As in every study, this study also has some limitations. The first of these was that the study was conducted only in ports in a certain region. At the same time, the survey method was preferred in order to measure the instantaneous perception levels of the seafarers. This method actually presents the cross-sectional data to the researcher. In other words, the level of perception and reliability can be increased with the test-repeat method. In future studies on seafarers, it can be considered that researchers apply the test-repeat method and select employees from different ports. It is also possible to compare seafarers in different countries. Thus, it may be possible to obtain more inclusive results.

In order to minimize the burnout levels of those working in maritime or port industries, training can be given to improve the self-efficacy of the employees. Sample applications can be shown so that employees can make their activities more enjoyable. New applications (in addition to internet-based video chat) can be developed to facilitate the communication of employees with their relatives. Special areas can be created for employees according to their interests (such as new, up-to-date books, videos, sports and games).

6.1 Practical contributions of the research

- (1) It has been observed that increasing the self-efficacy of seafarers reduces emotional burnout levels. This has shown that individuals with high self-efficacy can keep their feelings of burnout at minimal levels.
- (2) Strong self-efficacy among seafarers reduced the level of individual alienation. Strong self-efficacy among seafarers can strengthen dialogue with other employees. It can also contribute to the employee's social activities.
- (3) The increase in individual alienation among seafarers has also caused their emotional exhaustion levels to increase. The feeling of alienation among seafarers has strengthened the development of the feeling of burnout. This situation may cause reluctance among employees to change jobs or professions. In this context, some training can be given to seafarers to ensure that their work activities are carried out in a healthy manner. In addition, some activities (such as games, entertainment, sports and cultural activities) can be carried out to reduce feelings of alienation and burnout in work environments.
- (4) Individual alienation played a partial mediator role in the relationship between self-efficacy and emotional exhaustion in seafarers. Individual alienation was found to have a negative mediating effect. This revealed that individual alienation among seafarers weakens the relationship between self-efficacy and emotional exhaustion. This result shows that there is a need for activities that can minimize the individual alienation levels of employees working on ships.

6.2 Research suggestions

- (1) Training regarding work activities can be provided to improve the self-sufficiency of seafarers.

- (2) In order to reduce the emotional exhaustion and organizational alienation levels of employees, there may be a need for social support, making work environments more enjoyable, having translators on every ship for those who do not speak a common language or composing a technological infrastructure to provide this service.
- (3) Composing ships with a strong technological infrastructure can strengthen employees' communication with their families. Providing this infrastructure can reduce employees' concerns.
- (4) Further improvements can be made regarding the material and moral rights of seafarers.
- (5) Fair job sharing can be done by taking into account the status differences between employees and the balance regarding employee performance and the functionality of work activities.
- (6) Extra precautions (with the help of camera systems) can be taken for the occupational safety of employees.
- (7) Social activities can be applied at certain times to reduce organizational alienation and emotional burnout.
- (8) Digital training opportunities can be provided to seafarers to increase their harmonious mobility and improve their skills.

The research consists of 263 seafarers working on ships docking at the ports of Zonguldak, Karadeniz Ereğli, Eren and Filyos in the Western Black Sea region of Turkey, where research on the subject has not been conducted before. In addition, in future studies as well as social, sports, cultural and recreational activities, on the operating environments of seafarers, the effects of traditions and beliefs can be investigated. For example, in terms of belief, the recreational habits of seafarers can be an interesting research topic. Since many seafarers come from different parts of the world, the effects of spoken languages on alienation and burnout levels can be examined.

References

- Aiken, M. and Hage, J. (1966), "Organizational alienation: a comparative analysis", *American Sociological Review*, Vol. 31 No. 4, pp. 497-507, doi: [10.2307/2090773](https://doi.org/10.2307/2090773).
- Albayrak, A.S. (2012), "Çoklu doğrusal bağlantı halinde en küçük kareler tekniğinin alternatifli yanlı tahmin teknikleri ve bir uygulama", *Uluslararası Yönetim İktisat ve İşletme Dergisi*, Vol. 1 No. 1, pp. 105-126.
- Avey, J.B., Reichard, R.J., Luthans, F. and Mhatre, K.H. (2011), "Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance", *Human Resource Development Quarterly*, Vol. 22 No. 2, pp. 127-152, doi: [10.1002/hrdq.20070](https://doi.org/10.1002/hrdq.20070).
- Avtgis, T.A., Thomas-Maddox, C., Taylor, E. and Patterson, B.R. (2007), "The influence of employee burnout syndrome on the expression of organizational dissent", *Communication Research Reports*, Vol. 24 No. 2, pp. 97-102, doi: [10.1080/08824090701304725](https://doi.org/10.1080/08824090701304725).
- Bandura, A. (1977), "Self-efficacy: toward a unifying theory of behavioral change", *Psychological Review*, Vol. 84 No. 2, pp. 191-215, doi: [10.1037/0033-295X.84.2.191](https://doi.org/10.1037/0033-295X.84.2.191).
- Baron, R.M. and Kenny, D.A. (1986), "The moderator–mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations", *Journal of Personality and Social Psychology*, Vol. 51 No. 6, pp. 1173-1182, doi: [10.1037//0022-3514.51.6.1173](https://doi.org/10.1037//0022-3514.51.6.1173).
- Battal, F. and İbrahim, A. (2023), "How Cynicism mediates spiritual leadership and organizational commitment? (The case of Turkish and Indonesian Universities)", *Ege Academic Review*, Vol. 23 No. 2, pp. 315-330, doi: [10.21121/eab.1186184](https://doi.org/10.21121/eab.1186184).

- Bayram, N. (2010), Yapısal Eşitlik Modellemesine Giriş AMOS Uygulamaları, Ezgi Kitabevi, available at: https://books.google.com.tr/books/about/Yap%C4%B1sal_e%C5%9Fitlik_modellemesine_giri%C5%9F_A.html?id=cPF5MwEACAAJ&redir_esc=y
- Bentler, P.M. and Yuan, K.H. (1999), "Structural equation modeling with small samples: test statistics", *Multivariate Behavioral Research*, Vol. 34 No. 2, pp. 181-197, doi: [10.1207/S15327906Mb340203](https://doi.org/10.1207/S15327906Mb340203).
- Bergheim, K., Nielsen, M.B., Mearns, K. and Eid, J. (2015), "The relationship between psychological capital, job satisfaction, and safety perceptions in the maritime industry", *Safety Science*, Vol. 74, pp. 27-36, doi: [10.1016/j.ssci.2014.11.024](https://doi.org/10.1016/j.ssci.2014.11.024).
- Borovnik, M. (2011), "Occupational health and safety of merchant seafarers from Kiribati and Tuvalu", *Asia Pacific Viewpoint*, Vol. 52 No. 3, pp. 333-346, doi: [10.1111/j.1467-8373.2011.01459.x](https://doi.org/10.1111/j.1467-8373.2011.01459.x).
- Boyas, J. and Wind, L.H. (2010), "Employment-based social capital, job stress, and employee burnout: a public child welfare employee structural model", *Children and Youth Services Review*, Vol. 32 No. 3, pp. 380-388, doi: [10.1016/j.chilyouth.2009.10.009](https://doi.org/10.1016/j.chilyouth.2009.10.009).
- Brewer, E.W. and Shapard, L. (2004), "Employee burnout: a meta-analysis of the relationship between age or years of experience", *Human Resource Development Review*, Vol. 3 No. 2, pp. 102-123, doi: [10.1177/1534484304263335](https://doi.org/10.1177/1534484304263335).
- Büyüköztürk, Ş. (2002), *Sosyal Bilimler İçin Veri Analizi El İstatistik*, Araştırma Deseni, SPSS Uygulamaları ve Yorum, Pegem Yayınları, Ankara.
- Camadan, F., Çaylak, B., Yılmazlar, O., Yılmaz, K. and Gül Kara, S. (2017), "The role of self-efficacy and burnout on the alienation of psychological counselors", *Bartın University Journal of Faculty of Education*, Vol. 6 No. 3, pp. 1309-1330, doi: [10.14686/buefad.337407](https://doi.org/10.14686/buefad.337407).
- Ceylan, A. and Sulu, S. (2011), "Organizational injustice and work alienation", *Ekonomika and Management*, Vol. 2, pp. 65-78.
- Chang, C.H., Lu, C.S. and Lai, P.L. (2022), "Examining the drivers of competitive advantage of the international logistics industry", *International Journal of Logistics Research and Applications*, Vol. 25 No. 12, pp. 1523-1541, doi: [10.1080/13675567.2021.1915263](https://doi.org/10.1080/13675567.2021.1915263).
- Chung, Y.S., Lee, P.T.W. and Lee, J.K. (2017), "Burnout in seafarers: its antecedents and effects on incidents at sea", *Maritime Policy and Management*, Vol. 44 No. 7, pp. 916-931, doi: [10.1080/03088839.2017.1366672](https://doi.org/10.1080/03088839.2017.1366672).
- Crawford, E.R., Lepine, J.A. and Rich, B.L. (2010), "Linking job demands and resources to employee engagement and burnout: a theoretical extension and meta-analytic test", *Journal of Applied Psychology*, Vol. 95 No. 5, pp. 834-848, doi: [10.1037/a0019364](https://doi.org/10.1037/a0019364).
- Dolu, D.A., Tavacıoğlu, L., Kılınc, A.T., Kordlar, A.A. and Kızılsaç, B.B. (2023), "The relationship between workload, work stress and burnout in masters and deck officers", *Eurasian Academy of Sciences Eurasian Business and Economics Journal*, Vol. 34, pp. 91-104, doi: [10.17740/eas.econ.2023-V34-07](https://doi.org/10.17740/eas.econ.2023-V34-07).
- Ergin, C. (1992), "Doktor ve hemsirelerde tükenmişlik ve Maslach tükenmişlik ölçeğinin uyarlanması", *VII. Ulusal Psikoloji Kongresi*, 22th September 1992 Ankara (Turkey).
- Farahbakhsh, A., Salajeghe, S. and Ziaaddini, M. (2020), "Educating the dimensions of work alienation and deviant behaviors", *Revista Conrado*, Vol. 16 No. 74, pp. 64-71.
- Field, A. (2005), *Discovering Statistics Using SPSS*, Sage Publications, London, Anuario de psicología/ The UB Journal of Psychology, pp. 195-196.
- Fu, L. and Charoensukmongkol, P. (2022), "Benefits of psychological capital on host country nationals' support and burnout of Chinese expatriates in Thailand: the moderating effect of personal characteristics", *Asia-Pacific Journal of Business Administration*, Vol. 14 No. 3, pp. 1-20, doi: [10.1108/APJBA-06-2020-0181](https://doi.org/10.1108/APJBA-06-2020-0181).
- Gabriel, K.P. and Aguinis, H. (2021), "How to prevent and combat employee burnout and create healthier workplaces during crises and beyond", *Business Horizons*, Vol. 65 No. 2, pp. 1-24, doi: [10.1016/j.bushor.2021.02.037](https://doi.org/10.1016/j.bushor.2021.02.037).

- Haga, T. (2022), "Alienation in a digitalized world", *AI and Society*, Vol. 37 No. 2, pp. 801-814, doi: [10.1007/s00146-021-01381-z](https://doi.org/10.1007/s00146-021-01381-z).
- Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2017), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage Publications, available at: <https://uk.sagepub.com/en-gb/eur/a-primer-on-partial-least-squares-structural-equation-modeling-pls-sem/book270548>
- Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019), "When to use and how to report the results of PLS-SEM", *European Business Review*, Vol. 31 No. 1, pp. 2-24, doi: [10.1108/EBR-11-2018-0203](https://doi.org/10.1108/EBR-11-2018-0203).
- Heiman, G. (2013), *Basic Statistics for the Behavioral Sciences*, Cengage Learning, available at: <https://dokumen.pub/basic-statistics-for-the-behavioral-sciences-7nbsped-1133956521-9781133956525.html>
- Heslin, P.A. and Klehe, U.C. (2006), "Self-efficacy", in Rogelberg, S.G. (Ed.), *Encyclopedia of Industrial/Organizational Psychology*, Vol. 2, pp. 705-708.
- Hofstede, G. (1976), "Alienation at the top", *Organizational Dynamics*, Vol. 4 No. 3, pp. 44-60, doi: [10.1016/0090-2616\(76\)90035-8](https://doi.org/10.1016/0090-2616(76)90035-8), available at: <http://etikarastirma.com/tr/icerik/bilgi-merkezi/10> (accessed 1 July 2022).
- Islam, M.R., Ahmed, T., Suhrab, M.I.R., Billah, M.A. and Sayed, M.A.A. (2022), "Relationship between fatigue and work performance of Malaysian seafarers", *NeuroQuantology*, Vol. 20 No. 6, pp. 6942-6957, doi: [10.14704/nq.2022.20.6.NQ22700](https://doi.org/10.14704/nq.2022.20.6.NQ22700).
- Jackson, S.E. and Schuler, R.S. (1983), "Preventing employee burnout", *Personnel*, Vol. 60 No. 2, pp. 58-68.
- Jeżewska, M., Leszczyńska, I. and Jaremin, B. (2006), "Work related stress in seamen", *International Maritime Health*, Vol. 57 Nos 1-4, pp. 66-75.
- Jöreskog, K.G. and Sörbom, D. (1993), *LISREL 8: User's Guide*, Scientific Software, Chicago.
- Karger, H.J. (1981), "Burnout as alienation", *Social Service Review*, Vol. 55 No. 2, pp. 270-283, doi: [10.1086/643917](https://doi.org/10.1086/643917).
- Kartal, S.K. and Dirlık, E.M. (2016), "Historical development of the concept of validity and the most preferred technique of reliability: Cronbach alpha coefficient", *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, Vol. 16 No. 4, pp. 1865-1879.
- Khan, M.A.S., Jianguo, D., Mann, A., Saleem, S., Boamah, K.B., Javed, U. and Usman, M. (2019), "Rejuvenating the concept of work alienation through job demands-resources model and examining its relationship with emotional exhaustion and explorative and exploitative learning", *Psychology Research and Behavior Management*, Vol. 12, pp. 931-941, doi: [10.2147/PRBM.S204193](https://doi.org/10.2147/PRBM.S204193).
- Khayyat, S. and Mousa, A. (2022), "The impact of psychological alienation on self-efficacy: a case study of palestinian refugee youth", *International Humanities Studies*, Vol. 8 No. 1, pp. 17-36.
- Lambert, E.G., Barton-Bellessa, S.M. and Hogan, N.L. (2015), *The Consequences of Emotional Burnout Among Correctional Staff*, SAGE Open, pp. 1-15, doi: [10.1177/2158244015590444](https://doi.org/10.1177/2158244015590444).
- Leech, N.L., Barrett, K.C. and Morgan, G.A. (2005), *SPSS for Intermediate Statistics: Use and Interpretation*, Lawrence Erlbaum Associates, Mahwah, NJ, ISBN 0-8058-4790-1.
- Luthans, F. and Youssef, C.M. (2004), "Human, social, and now positive psychological capital management: investing in people for competitive advantage", *Published in Organizational Dynamics*, Vol. 33 No. 2, pp. 143-160, doi: [10.1016/j.orgdyn.2004.01.003](https://doi.org/10.1016/j.orgdyn.2004.01.003).
- Luthans, F. and Youssef-Morgan, C.M. (2017), "Psychological capital: an evidence-based positive approach", *Published in Annual Review of Organizational Psychology and Organizational Behavior*, Vol. 4 No. 17, pp. 1-43, doi: [10.1146/annurev-orgpsych-032516-113324](https://doi.org/10.1146/annurev-orgpsych-032516-113324).
- Luthans, F., Youssef, C.M. and Avolio, B.J. (2007), "Psychological capital: investing and developing positive organizational behavior", in Nelson, D.L. and Cooper, C.L. (Eds), *Positive Organizational Behavior*, SAGE Publication, pp. 9-24, ISBN 978-1-4129-1212-9, doi: [10.4135/9781446212752.n2](https://doi.org/10.4135/9781446212752.n2).

- Luthans, F., Avey, J.B. and Patera, J.L. (2008), "Experimental analysis of a web-based training intervention to develop positive psychological capital", *Published in Academy of Management Learning and Education*, Vol. 7 No. 2, pp. 209-221, doi: [10.5465/AMLE.2008.32712618](https://doi.org/10.5465/AMLE.2008.32712618).
- Mahmoud, A.B., Berman, A., Reisel, W., Fuxman, L. and Hack-Polay, D. (2024), "Examining generational differences as a moderator of extreme-context perception and its impact on work alienation organizational outcomes: implications for the workplace and remote work transformation", *Scandinavian Journal of Psychology*, Vol. 65 No. 1, pp. 70-85, doi: [10.1111/sjop.12955](https://doi.org/10.1111/sjop.12955).
- Maricutoiu, L.P., Sava, F.A. and Butta, O. (2016), "The effectiveness of controlled interventions on employees' burnout: a meta-analysis", *Journal of Occupational and Organizational Psychology*, Vol. 89, pp. 1-27, doi: [10.1111/joop.12099](https://doi.org/10.1111/joop.12099).
- Maslach, C. and Jackson, S.E. (1981), "The measurement of experienced burnout", *Journal of Occupational Behaviour*, Vol. 2, pp. 99-113, doi: [10.1002/job.4030020205](https://doi.org/10.1002/job.4030020205).
- Maslach, C., Schaufeli, W.B. and Leiter, M.P. (2001), "Job burnout", *Annual Review of Psychology*, Vol. 52 No. 1, pp. 397-422, doi: [10.1146/annurev.psych.52.1.397](https://doi.org/10.1146/annurev.psych.52.1.397).
- Miller, K.I., Ellis, B.H., Zook, E.G. and Lyles, J.S. (1990), "An integrated model of communication, stress, and burnout in the workplace", *Communication Research*, Vol. 17 No. 3, pp. 300-326, doi: [10.1177/0093650900170030](https://doi.org/10.1177/0093650900170030).
- Mottaz, C.J. (1981), "Some determinants of work alienation", *Sociological Quarterly*, Vol. 22 No. 4, pp. 515-529, doi: [10.1111/j.1533-8525.1981.tb00678.x](https://doi.org/10.1111/j.1533-8525.1981.tb00678.x).
- Murphy, K.E. (1985), "Macro versus micro remedies for alienation in the workplace", *International Journal of Public Administration*, Vol. 7 No. 1, pp. 83-105, doi: [10.1080/01900698508524485](https://doi.org/10.1080/01900698508524485).
- Nightingale, D.V. and Toulouse, J.-M. (1978), "Alienation in the workplace: a comparative study in French and English-Canadian organizations", *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, Vol. 10 No. 4, pp. 271-282, doi: [10.1037/h0081557](https://doi.org/10.1037/h0081557).
- Nittari, G., Gibelli, F., Bailo, P., Sirignano, A. and Ricci, G. (2022), "Factors affecting mental health of seafarers on board merchant ships: a systematic review", *From the Journal Reviews on Environmental Health*, Vol. 39, pp. 1-10, doi: [10.1515/reveh-2021-0070](https://doi.org/10.1515/reveh-2021-0070).
- Norman, S.M., Avey, J.B., Nimmich, J.L. and Pigeon, N.G. (2010), "The interactive effects of psychological capital and organizational identity on employee organizational citizenship and deviance behaviors", *Journal of Leadership and Organizational Studies*, Vol. 17 No. 4, pp. 380-391, doi: [10.1177/1548051809353764](https://doi.org/10.1177/1548051809353764).
- Oldenburg, M., Jensen, H.-J. and Wegner, R. (2013), "Burnout syndrome in seafarers in the merchant marine service", *International Archives of Occupational and Environmental Health*, Vol. 86 No. 4, pp. 407-416, doi: [10.1007/s00420-012-0771-7](https://doi.org/10.1007/s00420-012-0771-7).
- Patchiappane, M. and Rengamani, J. (2017), "A study on the factors influencing the job burnout of Indian seafarers", *International Journal of Research in Management, Economics and Commerce*, Vol. 7 No. 11, pp. 176-182.
- Peplińska, A., Jeżewska, M., Leszczyńska, I. and Połomski, P. (2013), "Stress and the level of perceived anxiety among mariners: the mediating role of marital satisfaction", *International Maritime Health*, Vol. 64 No. 4, pp. 221-225, doi: [10.5603/imh.2013.0008](https://doi.org/10.5603/imh.2013.0008).
- Pines, A.M. (2002), "The changing psychological contract at work and employee burnout", *Journal of Health and Human Services Administration*, Vol. 25 No. 1, pp. 11-32, doi: [10.1177/107937390202500102](https://doi.org/10.1177/107937390202500102), available at: <https://www.jstor.org/stable/25780981>
- Purba, D., Hasugian, S., Harini, N.V. and Zuhri, Z. (2020), "Capturing cadets' self-efficacy to promote safe future of seafarer", *Management and Entrepreneurship: Trends of Development*, Vol. 3 No. 13, pp. 24-34, doi: [10.26661/2522-1566/2020-3/13-03](https://doi.org/10.26661/2522-1566/2020-3/13-03).
- Raykov, T. and Marcoulides, G.A. (2006), *A First Course in Structural Equation Modeling*, Lawrence Erlbaum, Mahwah, NJ, doi: [10.1177/1094428107308985](https://doi.org/10.1177/1094428107308985).

- Rodriguez-Carvajal, R., Moreno-Jimenez, B., Rivas-Hermosilla, S., Alvarez-Bejarano, A. and Vergel, A.I.S. (2010), "Positive psychology at work: mutual gains for individuals and organizations", *Revista de Psicología del Trabajo y de las Organizaciones*, Vol. 26 No. 3, pp. 235-253, doi: [10.5093/tr2010v26n3a7](https://doi.org/10.5093/tr2010v26n3a7).
- Rowe, F., Ngwenyama, O. and Richet, J.-L. (2020), "Contract-tracing apps and alienation in the age of Covid-19", *European Journal of Information Systems*, Vol. 29 No. 5, pp. 545-562, doi: [10.1080/0960085X.2020.1803155](https://doi.org/10.1080/0960085X.2020.1803155).
- Salazar, P.A.C., Arceo, T.G.O., Laude, M.M., Macalintal, L.A.V., Tatlonghari, E.M.C., Viana, S.N.R. and Felicen, S.S. (2019), "Seafarers' distress and coping mechanism: basis for support program", *Asia Pacific Journal of Education, Arts and Sciences*, Vol. 6 No. 1, pp. 76-88.
- Sedgwick, P. (2014), "Spearman's rank correlation coefficient", *BMJ: British Medical Journal*, Vol. 349, pp. 1-3, doi: [10.1136/bmj.g7327](https://doi.org/10.1136/bmj.g7327).
- Seeman, M. (1975), "Alienation studies", *Annual Review of Sociology*, Vol. 1, pp. 91-123, doi: [10.1146/annurev.so.01.080175.000515](https://doi.org/10.1146/annurev.so.01.080175.000515).
- Sobel, M.E. (1982), "Asymptotic confidence intervals for indirect effects in structural equation models", *Sociological Methodology*, Vol. 13, pp. 290-312, doi: [10.2307/270723](https://doi.org/10.2307/270723).
- Soelton, M., Noermijati, N., Rohman, F., Mugiono, Puspaningrum, A., Yuniarinto, A. and Septianasari (2020), "Burnouts didn't happen in individuals that have a strong self efficacy", *PalArch's Journal of Archaeology of Egypt/Egyptology*, Vol. 17 No. 6, pp. 4238-4251.
- Taber, K.S. (2018), "The use of Cronbach's alpha when developing and reporting research instruments in science education", *Research in Science Education*, Vol. 48 No. 1, pp. 1273-1296, doi: [10.1007/s11165-016-9602-2](https://doi.org/10.1007/s11165-016-9602-2).
- Tavacioglu, L., Taç, U., Eski, O.Ö. and Gökmen, N. (2019), "Burnout and job satisfaction among Turkish oceangoing seafarers", *International Maritime Health*, Vol. 70 No. 4, pp. 232-238, doi: [10.5603/IMH.2019.0037](https://doi.org/10.5603/IMH.2019.0037).
- Tobias, S. and Carlson, J.E. (1969), "Brief report: Bartlett's test of sphericity and chance findings in factor analysis", *Multivariate Behavioral Research*, Vol. 4 No. 3, pp. 375-377, doi: [10.1207/s15327906mbr0403_8](https://doi.org/10.1207/s15327906mbr0403_8).
- Toor, S.-u-R. and Ofori, G. (2010), "Positive psychological capital as a source of sustainable competitive advantage for organizations", *Journal of Construction Engineering and Management*, Vol. 136 No. 3, pp. 341-352, doi: [10.1061/\(ASCE\)CO.1943-7862.0000135](https://doi.org/10.1061/(ASCE)CO.1943-7862.0000135).
- Toygur, A., Nart, S. and Yıldırım, U. (2023), "Work-family conflict and work alienation among seafarers: the mediating role of emotional exhaustion", *Marine Policy*, Vol. 155, pp. 1-7, doi: [10.1016/j.marpol.2023.105759](https://doi.org/10.1016/j.marpol.2023.105759).
- Turan, E., Bozkurt, S., Çelebi, U.B. and Ekinçi, S. (2021), "The role of burnout in the effect of work-family conflicts on job satisfaction: a research for key players in the maritime industry", *Maritime Policy and Management*, Vol. 49 No. 8, pp. 1-14, doi: [10.1080/03088839.2021.1950859](https://doi.org/10.1080/03088839.2021.1950859).
- Uğurlu, O., Yıldız, S., Aydın, M., Aydın, T., Kaptan, M. and Wang, J. (2021), "Analysis of occupational burnout utilising Maslach inventory: a case study of Turkish male seafarers", *Maritime Policy and Management*, Vol. 48 No. 8, pp. 1124-1137, doi: [10.1080/03088839.2020.1843725](https://doi.org/10.1080/03088839.2020.1843725).
- Uysalcr, L.A. (2010), "Örgütsel Yabancılaşmanın Örgütsel Bağlılık, İş Tatmini Ve İşten Ayrılma Eğilimi İle Bağlantısı Ve Yabancılaşma Yönetimi", (Master's thesis, Sosyal Bilimler Enstitüsü).
- Voitenko, E., Myronest, S., Osodlo, V., Kushnirenko, K. and Kalenychenko, R. (2021), "Influence of emotional burnout on coping behavior in pedagogical activity", *International Journal of Organizational Leadership*, Vol. 10, pp. 183-196.
- Yaşlıoğlu, M.M. (2017), "Factor analysis and validity in social sciences: application of exploratory and confirmatory factor analyses", *Istanbul University Journal of the School of Business*, Vol. 46, pp. 74-85.
- Yıldırım, I. (2015), "The correlation between organizational commitment and occupational burnout among the physical education teachers: the mediating role of self-efficacy", *International Journal of Progressive Education*, Vol. 11 No. 3, pp. 119-130.

-
- Yılmaz, V. and Kınaş, Y. (2020), "Kısmi en küçük kareler yapısal eşitlik modellemesiyle bir elektrik dağıtım şirketinin hizmet kalitesinin araştırılması", *Eskişehir Osmangazi Üniversitesi İktisadi Ve İdari Bilimler Dergisi*, Vol. 15 No. 2, pp. 437-456, doi: [10.17153/oguiibf.534641](https://doi.org/10.17153/oguiibf.534641).
- Youssef-Morgan, C.M. and Luthans, F. (2013), "Theory: toward a positive holistic model", *Advances in Positive Organizational Psychology*, Vol. 1, pp. 145-166, doi: [10.1108/S2046-410X\(2013\)0000001009](https://doi.org/10.1108/S2046-410X(2013)0000001009).
- Yu, C. (2020), "Relationship between owner-managers' creative self-efficacy, career involvement and career subjective well-being: evidence from marine-related enterprises in coastal city", in Bai, X. and Zhou, H. (Eds), *Advances in Water Resources, Environmental Protection, and Sustainable Development, Journal of Coastal Research*, Coconut Creek (Florida), No. 115, pp. 442-445, ISSN 0749-0208.
- Yuen, K.F., Bai, X. and Wang, X. (2020), "Safety behaviour at sea: policy implications for managing seafarers through positive psychology", *Marine Policy*, Vol. 121, pp. 1-11, doi: [10.1016/j.marpol.2020.104163](https://doi.org/10.1016/j.marpol.2020.104163).
- Yurdakul, G. and Öneren, M. (2021), "The relationship between social loafing and work alienation: an empirical analysis", *Journal of Administrative Sciences*, Vol. 19 No. 39, pp. 179-202, doi: [10.35408/comuybd.724154](https://doi.org/10.35408/comuybd.724154).
- Yurt, E. (2022), "Collective teacher self-efficacy and burnout: the mediator role of job satisfaction", *International Journal of Modern Education Studies*, Vol. 6 No. 1, pp. 51-69, doi: [10.51383/ijonmes.2022.168](https://doi.org/10.51383/ijonmes.2022.168).
- Zhang, X., Xu, J., Chai, S., Lei, M. and Lopez, V. (2017), "Correlation research on the self - efficacy and job alienation of clinical nurses", *Advances in Social Science, Education and Humanities Research*, Vol. 172, pp. 145-150, doi: [10.2991/icemaess-17.2017.34](https://doi.org/10.2991/icemaess-17.2017.34).
- Zhou, X. (2022), "Mental health self-efficacy as a moderator between the relationship of emotional exhaustion and knowledge hiding: evidence from music educational students", *Frontiers in Psychology*, Vol. 13, pp. 1-14, doi: [10.3389/fpsyg.2022.979037](https://doi.org/10.3389/fpsyg.2022.979037).

Corresponding author

Fetullah Battal can be contacted at: fbattal@bayburt.edu.tr

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgrouppublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com