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Relationship of individual psychological factors of cadets' adaptation in voyage conditions

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Abstract. The relevance of the study is conditioned by the need to update data on the specifics of the activities of cadet sailors due to rapid changes in the organisational structure of modern society and understanding the role of this profession in it. The purpose of the study was to reveal the psychophysiological and individual psychological determinants of adaptation and their interdependence in the context of professional activity of novice seafarers. The paper uses methods of theoretic and methodological analysis, psychodiagnostic survey, and Pearson's correlation analysis methods. As a result of the theoretical analysis, four groups of factors of professional adaptation were identified: psychophysiological, individual and psychological, socio-psychological, organisational and structural. Based on these factors, an empirical study was organised, which revealed the relationship between indicators of psychological stability, self-confidence, adaptability, and tolerance to ambiguity. It was determined that psychological resilience is associated with the parameters of passion, resourcefulness, optimism, and the level of expression of motivational components of professional activity of cadets, determined by the motives of life support and self-realisation. Disturbances in health, in particular in terms of exhaustion, emotional and vegetative instability, anxiety and fears, and maladjustment, affect the effectiveness and quality of value, emotional, volitional, social and informational regulation. The most common symptoms of health disorders among cadets on a voyage are vegetative and emotional instability, sleep disturbances, less pronounced symptoms of maladjustment such as addictions, anxiety, and fears, and the least pronounced symptoms are psychophysical exhaustion and willpower disorders. The paper contributes to the psychological science of professional and personal adaptability of the individual in extreme conditions. The study is of practical value for

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sociologists, teachers, psychologists, psychotherapists and doctors, who can contribute to solving problems of maladaptation in the labour sphere

Keywords: psychological stability; confidence; readiness for change; motivation; professional activity; regulation of activity

INTRODUCTION

In the modern world, it is quite difficult for a person to learn and acquire skills that would improve their life. Technological progress requires a rapid, sharp and large-scale step forward in the development of personal ability to perceive and adapt to innovations, while adapting them to their activities and life in general. Over the years, the requirement for the amount of necessary knowledge, skills, and abilities put forward to a person increases. A state of constant fatigue and exhaustion has been introduced, and a person who works continuously is now praised and encouraged to do so, although a few decades ago it was called workaholism and preventive measures were proposed for professional exhaustion. That is why the chosen topic requires comprehensive empirical research, which will reveal the specific properties of seafarers' personalities and will contribute to the acquisition of practical experience by researchers both in the field of studying adaptation factors and in the field of direct interaction – correction, development, or their formation.

When it comes to working in extreme conditions, these conditions have increased significantly – their frequency and scale. A person is not able to cope with such a tremendous workload without systematically renewing their strength and resting while making physical and mental efforts. This is especially true for people who have specific conditions of professional activity, accompanied by frequent stress, in particular, military personnel, firefighters, police officers, and sailors. Analysis of modern research on the topic of adaptability of sailors shows that the problem of adaptation to living conditions at sea on a ship concerns every sailor. The study of the health and performance of seafarers by E.A. Schmied *et al.* (2021) confirms that sailors experience health and behavioural problems, which highlights some facts of maladjustment. E.A. Schmied *et al.* (2023) in a study of the challenges faced by seafarers point to severe psychological stress and a lack of knowledge and skills to deal with and manage stress, including due to limited access to habitual activities and tools to improve their mental well-being. According to M.G. Bagus Ani Putra (2021), sailors experience a high level of stress associated with the organisation of the working environment, and in connection with the events of recent years, they confirm that they have difficulty concentrating and are strongly influenced by negative information coming from the news. L. Matysková *et al.* (2020), in the study of habits as prerequisites for adaptation, came to the conclusion that it is really difficult to develop new habits in a completely new environment, which requires abandoning previously effective ways of adaptation and self-management. Instead,

T. Khraban (2022) draws attention to other prerequisites for successful adaptability that precedes the psychological well-being of the cadet personality – healthy self-esteem, which forms the necessary positive states and promotes the experience of negative emotions in a favourable and constructive way for the individual. G.A. Prib *et al.* (2020), O. Soroka *et al.* (2022) note that the key to adaptability in professional activity is the high stress tolerance of employees and the ability to quickly and efficiently recover lost resources, which ensures stability in stressful situations and helps to respond accordingly to the requirements of professional activity with high efficiency. Based on the above, the purpose of the study was to reveal the features of the relationship between individual psychological factors of adaptation of cadets in voyage conditions.

MATERIALS AND METHODS

The study of psychological factors of cadets' adaptation in voyage conditions was implemented through successive tasks. First, a theoretical analysis of existing studies was conducted, such as O. Ichanska & K. Lopushanska (2019) and A. Shydelko *et al.* (2022) and recommendations for identifying indicators that indicate the adaptability of the individual and the success of its adaptation in the work environment. As a result, further work was aimed at investigating such parameters as psychological stability of a person in unusual circumstances, self-confidence, readiness for change (psychological flexibility) and motivation in professional activities.

To investigate these parameters, a block of psychodiagnostic methods was developed, containing 4 questionnaires. The Questionnaire "Well-being in extreme conditions" (2009) was developed within the framework of the symptomatic questionnaire of well-being, which was primarily focused on identifying the tendencies of military personnel to pathological stress response in extreme conditions of military service. Since the study was conducted with a contingent of cadet sailors in conditions of voyage, which can be attributed to non-standard and often extreme conditions of activity, the questionnaire is quite an appropriate choice for studying psychological resistance to stressful circumstances. It contains 42 statements that describe the usual way of life, and it is proposed to confirm or reject these statements. The level of the following symptoms of well-being was determined: psychophysical exhaustion, violation of volitional regulation, instability of the emotional background and mood, vegetative instability, sleep disorders, the presence of anxiety and fears, manifestations of maladaptation in the form of addiction. Further, a general

conclusion was drawn regarding the level of neuroticism, the medium and high levels of which are interpreted as psychological instability to extreme conditions and a state of poor adaptation.

The Rathus assertiveness schedule (RAS) (1973) technique was designed to diagnose the degree of self-confidence. It contained 30 questions that respondents rated based on the compatibility of statements with their usual behaviour, on a 5-point scale. As a result, data was obtained on a scale from 0 to 120 points, divided into 5 levels of self-confidence expression. The Personal Change-Readiness Survey (PCRS) technique developed by A. Rolnic *et al.* (2005) was used quite frequently in HR work, showing good effectiveness when it comes to dealing with stressful situations that arise due to changes. Since no one was able to fully cope with changes without experiencing some reactions and sensations accompanied by stressors, they resorted to resisting these changes, which helped to protect themselves from stress in situations where they were most vulnerable and sensitive. The method had 35 questions and identified parameters that explain these features of confrontation and organically fit into the framework of positive psychology. These were passion, ingenuity, optimism, courage, adaptability, confidence, and tolerance to ambiguity.

Questionnaire for diagnosing the motives of professional activity by T.M. Frantseva determined the complex structure of motives for professional activity and identified factors that regulate the professional activity of a specialist. It contained 60 questions with 5 possible answers on a 5-point scale. As a result, there was a certain picture of ideas about the sphere of professional motives of the

individual. They, in turn, were divided into internal and external. Internal ones included: cognitive motive, motives of activity and self-realisation. External ones included: the motive of life support, interaction, and recognition. Separately, the methodology examined the methods of regulating professional activity: value, emotional, social, volitional, and informational regulation. The organisation of the environment and sampling took place at the LLC "Mersk Ukraine Ltd". The number of respondents involved in the survey was 42. Sample characteristics: male cadets in voyage conditions, aged 20-25 years. The survey was conducted in an online format using Google Form, individually and on the basis of confidentiality and anonymity. During the survey, all the provisions of the Declaration of Helsinki (2013) were observed, and participants were informed about the possibility of spreading information in the scientific community, in particular in this paper.

RESULTS

Interrelation of individual psychological adaptability indicators

To understand the nature of the influence of individual psychological parameters and the success of adaptation, a correlation analysis (according to the Pearson criterion) of individual psychological indicators was performed to determine which properties and to what extent have an effect on the adaptability of the individual as a personal characteristic. Since self-confidence is the key to psychological stability and inner readiness for any challenges of fate, the mutual influence of the indicator of neuroticism and self-confidence on other individuality determinants were considered first (Table 1).

Table 1. Relationship between neuroticism indicators and self-confidence

	Psychophysical exhaustion	Violation of will	Emotional instability	Vegetative instability	Sleep disorders	Anxiety and fears	Maladaptation	Neuroticism
Neuroticism	0.323*	0.575**	0.481**	0.519**	0.545**	0.398**	0.313*	1
Self-confidence	-	-	-0.402**	-	-0.404**	-	-	-0.391*

Notes: * – correlation is statistically significant at the level of $p < 0.05$; ** – correlation is statistically significant at the level of $p < 0.01$

Source: developed by the author

The obtained correlation analysis showed that, firstly, neurotisation is affected by absolutely every parameter of well-being in extreme situations (correlation of the indicator total level of neuroticism and the indicator psychophysical exhaustion ($r = 0.323$, at $p < 0.05$), and the indicator of willpower disorder ($r = 0.575$, at $p < 0.01$), the indicator of emotional instability ($r = 0.481$, at $p < 0.01$), and the indicator of vegetative instability ($r = 0.519$, at $p < 0.01$), the indicator of sleep disorders ($r = 0.545$, at $p < 0.01$), and the indicator of anxiety and fears ($r = 0.398$, at $p < 0.01$), the indicator of maladaptation ($r = 0.313$, at $p < 0.05$). Since these parameters were considered as components that, with a certain expression,

constitute the corresponding level of neuroticism of the individual, the data obtained only confirm this. It is worth noting that psychological stability is the result of the absence of indicators of psychophysical exhaustion, dysfunctions of will and adaptation, vegetative and emotional instability. However, as the analysis of the psychoemotional state of a person in the current world shows, almost everyone has at least one or more symptoms of neuroticism. Actually, this is confirmed by this study, because among the sample only 14% have a really high indicator of psychological stability, while as much as 67% have an average indicator. As for the self-confidence indicator, there is a correlation between the overall

level of neuroticism ($r = -0.391$, at $p < 0.05$), the emotional instability indicator ($r = -0.402$, at $p < 0.01$), and the sleep disturbance indicator ($r = -0.404$, at $p < 0.01$). That

is, self-confidence can provide higher psychological stability, especially with regard to emotional stability, and also prevent sleep violations (Table 2).

Table 2. Relationship between neuroticism, self-confidence, and readiness for change

	Passion	Ingenuity	Optimism	Courage	Adaptability	Confidence	Tolerance to ambiguity
Neuroticism	-0.391*	-0.350*	-0.387*	-	-0.337*	-	-
Self-confidence	-	-	0.386*	-	0.306*	-	0.383*

Notes: * – correlation is statistically significant at the level of $p < 0.05$; ** – correlation is statistically significant at the level of $p < 0.01$

Source: developed by the author

The following correlation was found between the indicators of general neuroticism and passion ($r = -0.391$, at $p < 0.05$), ingenuity ($r = -0.350$, at $p < 0.05$), optimism ($r = -0.387$, at $p < 0.05$), adaptability ($r = 0.337$, at $p < 0.05$); between the indicators of self-confidence and optimism ($r = 0.386$, at $p < 0.05$), adaptability ($r = 0.306$, at $p < 0.05$), tolerance to ambiguity ($r = 0.383$, at $p < 0.05$). This suggests, first, that the levels of neuroticism and self-confidence significantly affect the adaptive capabilities of respondents, interacting with various individual-personal

connections. When a person has a sufficiently high vitality and energy, when they try to look for different ways to achieve goals and overcome difficulties, when a person looks at their present and future with hope and faith, the lower the level of neuroticism and, accordingly, the better the resilience in extreme circumstances. Optimism and a tolerance to ambiguity are also inherent in people with a sufficient level of self-confidence. In general, a psychologically stable and confident person shows higher adaptability results (Table 3).

Table 3. Relationship between indicators of well-being in extreme situations and readiness for change

	Passion	Optimism	Courage	Adaptability	Self-confidence	Tolerance to ambiguity
Psychophysical exhaustion	-	-	0.329*	-	0.304*	-
Violation of will	-	0.342*	-	-0.513**	-	-0.319*
Emotional instability	-	-	-0.350*	-	-0.306*	-
Vegetative instability	0.392*	0.336*	-	-	-	-
Sleep disorders	0.310*	-	0.331*	-	-	-
Anxiety and fears	0.383*	-	-	-	0.375*	-
Maladaptation	0.355*	-	-	0.340*	-	-

Notes: * – correlation is statistically significant at the level of $p < 0.05$; ** – correlation is statistically significant at the level of $p < 0.01$

Source: developed by the author

The parameters of well-being in extreme conditions and readiness for change are strongly interrelated. Thus, the degree of depletion of psychoenergetic resources can affect how brave, determined, and confident a person will feel. Violations of the regulation of the volitional sphere are observed with excessive optimism, undeveloped adaptability, and in the absence of tolerance and calmness in conditions of uncertainty. Emotional instability is accompanied by a loss of confidence in the correctness and correctness of their decisions and in themselves as a whole. With an increase in physical discomfort, sleep disorders, with an increase in fears and anxiety, and with

the appearance of addictions, there is a decrease in interest and enthusiasm for their activities. In addition, if cadets experience body discomfort and a malfunction in the body's functionality, this reduces their faith in future success. Sleep disorders lead to feelings of indecision and doubt, hesitation about the decisions made. When the degree of anxiety increases and many fears arise, there is also a decrease in self-confidence indicators. A tendency to various addictions, the use of sedatives, etc., indicates a low adaptability of the individual, since it does not provide for an effective and truly solving a problem situation, but only escape from it (Table 4).

Table 4. Relationship between indicators of neuroticism, self-confidence, motives and ways of regulating professional activity

	Life support motive	Cognitive motive	Activity motive	Self-realisation motive	Value regulation	Social regulation	Information regulation
Neuroticism	0.418**	-	-	-0.539**	-0.413**	0.396*	-0.348*
Self-confidence	0.348*	0.375*	0.320*	0.391*	0.394*	-	0.319*

Notes: * – correlation is statistically significant at the level of $p < 0.05$; ** – correlation is statistically significant at the level of $p < 0.01$

Source: developed by the author

Indicators of neuroticism and confidence also correlate with motives and regulatory methods of professional activity. These data determine the relationship between the reasons for choosing a profession and the individual characteristics of respondents. Thus, it is recorded that the overall level of neuroticism correlates with the life support motive ($r = 0.418$, at $p < 0.01$) and the self-realisation motive ($r = -0.539$, at $p < 0.01$). That is, the neurotisation of the individual can increase if the dominant need for professional activity is to earn money to provide for their family. If this motive is key in a person, that is, others are poorly expressed, this may be followed by an increase in tension about constant worries about the amount of wages, receiving additional rewards, this makes the focus in the activity very narrow, since the main goal is set as obtaining as much material benefit as possible. In addition, the self-realisation motive is absent with low psychological stability, which can be explained as follows: if a person experiences constant internal discomfort and tension for certain reasons, first of all it is necessary to satisfy the need for safety and comfort, while self-realisation has a secondary role in this case or is not considered at all, since for self-realisation it is necessary to have internal support and sufficient psychoenergetic resources, and skills of their recovery and regulation, which is usually absent with high neuroticism.

The self-confidence indicator correlates with the life support motive ($r = 0.348$, at $p < 0.05$), cognitive motive ($r = 0.375$, at $p < 0.05$), activity motive ($r = 0.320$, at $p < 0.05$), and self-realisation motive ($r = 0.391$, at $p < 0.05$). This means that a confident person, firstly, is able to establish the causes and purpose of their activity, and secondly, is guided by several areas of motivational structure, considering their life and professional activity holistically, as complementary structures that require functioning at many different levels. This person seeks new information, is not afraid of complications caused by innovations and innovations, initiates them themselves, as they see personal growth in this, is active in their work, is amateurish, and uses the profession as an opportunity to realise their sides and desires. Regarding the regulation of professional activity, respondents with well-developed motivational and value orientation and purposefulness, and good orientation in the constant information flow of news and changing data, have a lower level of neuroticism, while following social requirements and expectations, cadets feel more exhausted and anxious. Self-confidence manifests itself as part of a motivational

and value-oriented structure, and an informational one, when the respondent knows their goal, follows it, analysing surrounding events, information, and changes.

Severity of adaptability indicators in cadets in voyage conditions

As correlation analysis has shown, the state of well-being is associated with readiness for changes and ways of regulating the activity of the individual. These individual psychological parameters of the cadets under voyage conditions are discussed below (Fig. 1).

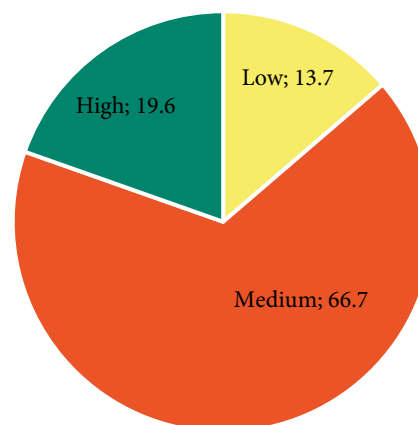


Figure 1. General level of neuroticism of cadets in voyage conditions

Source: developed by the author

Considering the results obtained in this experiment, only 13.7% of cadets scored points that signal a high degree of psychological resistance to extreme situations and are characterised as a state of good adaptability. However, 19.6% showed extremely low stress tolerance, a state of maladaptation, which was probably accompanied by high risks of pathological stress response and neurotic disorders. 66.7% of cadets, which is two-thirds of the entire sample, showed an average level of psychological resistance to extreme conditions and a state of satisfactory adaptability. These are fairly good results, even though their adaptability is more situational than general. However, it can be argued that for the majority of cadets in the study sample, the issue of adaptability is not an acute problem, but rather one that needs to be consolidated in the phases of success (Fig. 2).

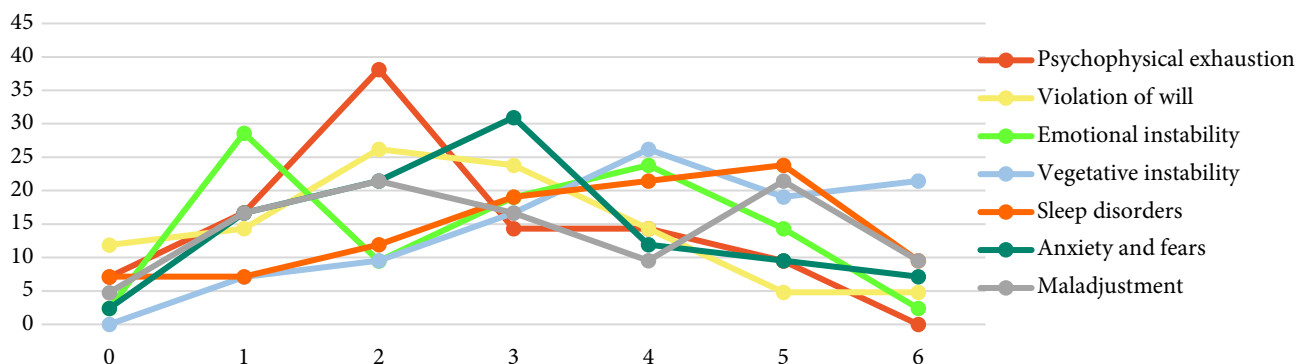


Figure 2. Frequency and level of expression of well-being symptoms in cadets during the voyage

Source: developed by the author

Given the schematic representation of the course of the symptoms of neuroticism of cadets on a voyage, some points can be summarised. The analysis uses a 6-point scale, where 0 – complete absence of the parameter, and 6 – extremely high value. First of all, according to some indicators, there is no extreme high level, namely, according to the indicator of Psychophysical exhaustion. That is, an acute and critical shortage of psychoenergetic resources were not recorded in the sample of cadets in voyage conditions. However, 38.1% of respondents indicate a reduced manifestation of symptoms (score of 2 points), 14.3% each have an average and slightly increased indicator (3 and 4 points). According to the indicator of vegetative instability, there is also an estimate that was not noted by any of the samples. This is a score of “0 points”, which indicates that there is no tendency to develop a symptom. That is, all cadets have vegetative instability to a certain extent; in particular, it is increased in 26.2%, extremely high in 21.4%, and high in 19%.

Other indicators include all estimates. Thus, 21.4% of cadets had a low level of Violation of will, and 23.8% had a moderate level. The Emotional instability indicator is most often found at a score of 1 – in 28.6% of people, as evidence of a low indicator, and a score of 4 – in 23.8% as an increased indicator. According to the indicator of Sleep disorders, the following picture was established: 23.8% of cadets have a high indicator, 21.4% – increased, 19% – average, 9.5% – extremely high. According to the indicator of Anxiety and fears, 31% indicated an average score, 21.4% – a reduced one. According to the indicator of Maladaptation, 21.4% scored two assessment scales indicating low and high indicators, 9.5% have an extremely high manifestation of the symptom. Thus, most often among cadets on the voyage there are violations in the symptoms of well-being, which form vegetative and emotional instability, sleep disorders, less pronounced symptoms of maladaptation as a tendency to addictions, anxiety, and fears, less manifested at high levels symptoms of psychophysical exhaustion and disorders of will.

Next, the study considers the individual psychological parameter of self-confidence, which is the key to adaptability. When a person is confident, they perceive most of the

stress factors, especially minor ones, without excessive psychoemotional stress, because they know their capabilities and strengths, that is, they are can cope with them. It also guarantees good health and a specific necessary reaction when it comes to troubles or difficulties, because a person has an understanding of what exactly they can do and an idea of the desired result. However, overconfidence, as well as underconfidence, borders on high levels of neuroticism and, for researchers, such indicators indicate an unrealistic self-perception and assessment of reality (Fig. 3).

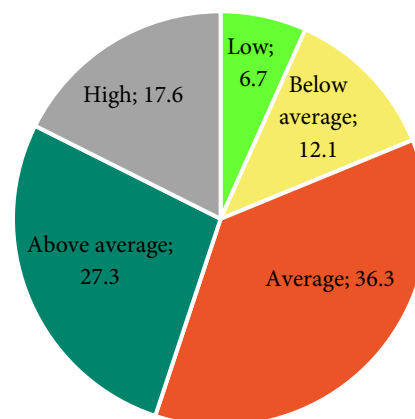


Figure 3. Level of self-confidence of cadets in voyage conditions

Source: developed by the author

As for the sample of cadets in voyage conditions, the following trends were observed: 27.3% have high and 36.3% have average values. Self-confidence is characterised by purposefulness and personal responsibility, a sense of autonomy and its defining role in making decisions and actions. With high values, cadets have an open mind in analysing the realities of life, due to which they are well-versed in it, with flexibility and efficiency in behaviour and considering various situational aspects. With averages, there is a tendency to avoid problems, especially when the person is tired or the question is too difficult. That is, there is a slightly lower individual activity, which underlies purposeful and delicate progress in life.

17.6% of cadets indicated self-confidence. These high values can be generalised as a tendency to excessive, reckless risk and perseverance, inability to let go of some situations when it needs to be done. A person may perceive themselves as majestic and omnipotent, but in reality it is a matter of all-encompassing control, born of anxiety and timidity that is not acknowledged. However, it is worth noting that with self-confidence, according to the methodology, a person is always quick and open to new experiences. While with indicators below average, which is 12.1% of people, and low, which is 6.7%, when it comes to self-doubt, this

means personal passivity, lack of willpower and perseverance, closeness in the expression of thoughts and feelings, emotional instability. These cadets have little flexibility, and new circumstances are always a challenge for them. Now, having received a detailed description of the parameters of well-being in emergency situations and self-confidence, it is advisable to consider what other individual psychological factors can affect neuroticism and uncertainty bordering on maladjustment. Accordingly, the factors that determine successful adaptation are also being studied, along with psychological resilience and self-confidence (Fig. 4).

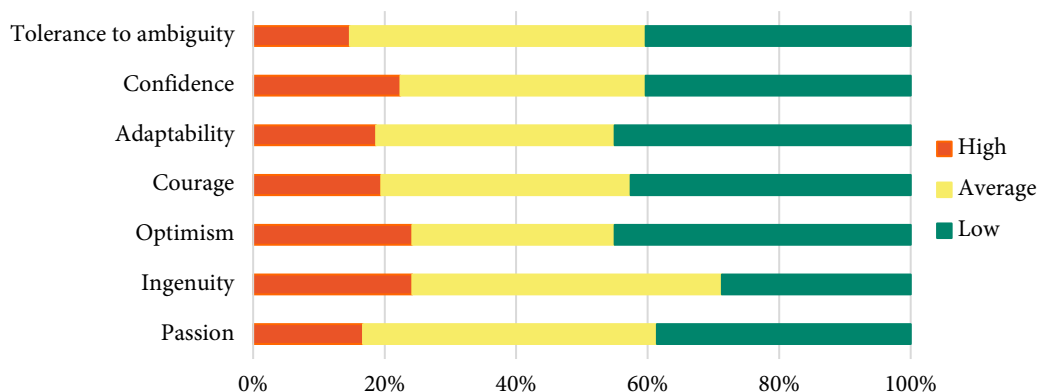


Figure 4. Parameters of readiness for changes among cadets in voyage conditions

Source: developed by the author

According to the interpretation, the optimal variant of the development of a particular property in the number system is based on the average values of the indicator. That is, as a norm, the desired level in this case is defined as average. The average level of passion and tolerance to ambiguity is 45% of cadets, ingenuity – 47.1%, optimism – 30.8%, courage and confidence – 37.9%, adaptability – 36.3%. Passion at this level indicates an increased vitality, activity and energy of the individual, their tirelessness due to a well-established system of resource provision and recovery. In 38.6% of cadets, it is underestimated, which indicates a weak vitality, lack of strength or desire for something, fatigue. In 16.7%, on the contrary, the results are too high, which can be a sign of hypertension, excessive mobility, inability to rest due to a developed need to always do something, be busy with something.

Ingenuity in average values symbolises the ability to find a way out of difficult circumstances when a person is able to turn to other, new sources of answers and information to find a solution to their situation. 28.7% of respondents have a low indicator, they have difficulties finding sources of information, and often feel “cornered” due to limited knowledge and ways to obtain it. 24.2%, on the contrary, show excessive enthusiasm in finding a variable solution to the situation, do not know how to analyse data, but rather accumulate it, in the end, not knowing how to use it due to the large volume. Optimism in average values is the embodiment of high hopes and faith in success, shows that a person focuses on the good, wanting to avoid the worst

options for the development of events, focuses not on the problem itself, but on how to solve it and in what ways. When the values are low, which is the case for 45% of the sample, pessimism, lack of belief that success can be real, focus on the problem and the troubles that follow, while the issue of solving these consequences is only discussed and perceived as a disaster. 24.2% of cadets are characterised by dreaminess and an unrealistic view of the world. They are already too optimistic, usually do not notice that something is wrong and needs a solution, believe in success, but do not use their strength to achieve it.

Courage in average scores is interpreted as a desire for the new and unknown, a willingness to abandon the already lived and reliable in favour of innovation. When the values are too low, as in the case of 42.6% of respondents, it means a lack of entrepreneurship, a fearful desire to stay stuck in the old, even when the situation requires updating knowledge, skills, material or other resources. And 19.5% of cadets show an excessive attraction to everything unknown and novelties, without distinguishing between important and secondary, they leave what they have already acquired in order to discover something else.

Adaptability at an average rate implies the ability to change your own plans and decisions, adapting to new circumstances, not to insist firmly only on your own when situational changes require it. 45% of cadets have a low score. This indicates that they do not have or are very poorly developed these skills listed above. However, 18.4% of cadets, on the contrary, have a very high rate. This may

indicate that they lack the firmness of decisions and actions when they are ready to change their plans even with the smallest and most insignificant changes. Confidence, if it has average values, is based on faith in themselves, in their own preferences and their own strength, in the fact that everything is within their power and possible, if only they want it. In 40.3%, the indicator is reduced, which indicates a lack of self-confidence and inability to manage their internal resources and strengths. In 22.4%, confidence took the form of arrogance, when their strengths and preferences are clearly exaggerated, which does not coincide with the real data of the individual.

Tolerance to ambiguity at average values is based on calmness in relation to the lack of clear and clear answers. This is self-control when there are situations of

ambiguity and unclear essence of the case, or when goals and expectations are not identified, or if the case started remains unfinished. When the values are too low, as in 40.3% of respondents, they talk about anxiety in these circumstances, an acute need for certainty and specification of conditions, requirements, goals, the final result, and the process itself. When the values are high, as in 14.7% of cadets, then they talk about indifference and insensitivity to what is happening around them, when a person acts purely according to their own instructions, not paying attention to other processes. Usually, such an activity does not give a productive result, since it does not have a vector, according to which it is organised and the final clear goal that would signal the completion of the case (Fig. 5).

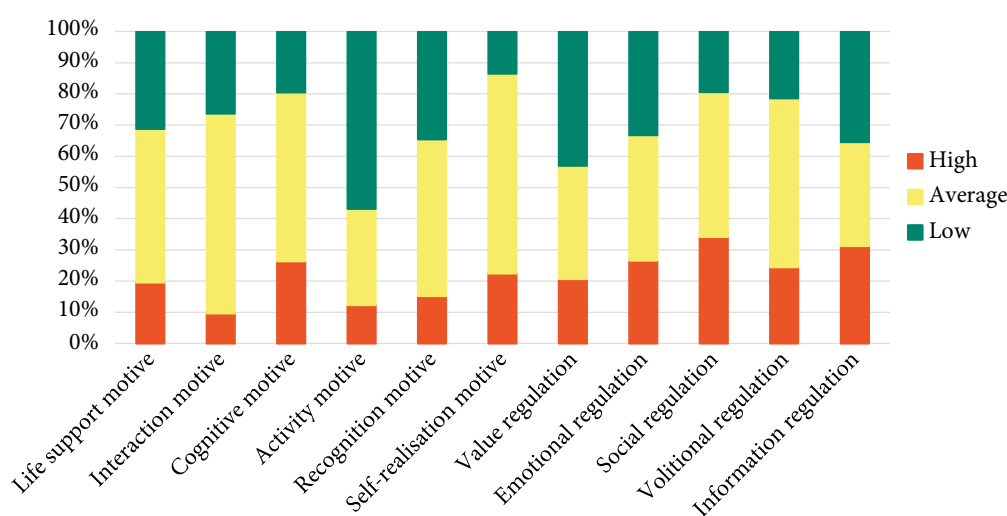


Figure 5. Parameters of motives and methods of regulating professional activity in cadets in voyage conditions

Source: developed by the author

The motives of external conditions and circumstances of cadets' activities are expressed as follows: the motive of life support is expressed in 19.5% at low levels, in 49.3% at medium levels, and in 31.2% at high levels. If the motive is shown, then professional behaviour is motivated by the needs for high earnings and material remuneration, the desire to have a job that would bring great benefits and various additional benefits, bonuses. The emphasis is placed on the ability to provide for the family, that is, attention at work is focused on earnings, remuneration for work. The interaction motive is expressed in 9.6% at low levels, in 64.1% at medium levels, and in 26.3% at high levels. It manifests itself in the orientation of behaviour to establish a certain nature of relationships. This means that the cadet strives for mutual understanding, mutual assistance, and mutual mental contact, which takes the form of transmitting non-verbal and verbal information to the communication partner. The recognition motive is expressed in 15.2% at low levels, in 50.2% at medium levels, and in 34.6% at high levels. If the motive of recognition prevails in the respondent, then their activity is focused on receiving praise

or approval from others – the need to be constantly highly appreciated for their own qualities and preferences, the need to feel respect from others.

As for the internal motives, that is, certain psychological properties of behaviour, the direct internal interest of the individual in what will happen, the following trend is observed: the cognitive motive is expressed in 19.5% at low, in 54.2% at medium, and in 26.3% at high levels. When it dominates, behaviour is motivated by new information and its receipt, when the respondent's desires fluctuate around increasing the depth of their work. In this case, a person is ready to meet changes in their work in order to raise the level of their complexity, update the requirements for more complex and high technical and qualification skills, and mobilise their intellectual abilities. The activity motif is expressed in 57.4% at low levels, 31.2% at medium levels, and 12.4% at high levels. It manifests itself in an inner readiness to enter into purposeful interaction with the environment, to self-activity built on the basis of the needs and interests of the individual, with the existing desire and desire to act. The self-realisation motive is expressed in 13.5% at low

levels, in 64.1% at medium levels, and in 22.4% at high levels. It symbolises the desire for self-improvement, the need for growth and development as a person, the desire to fully realise their abilities, the desire to feel personal competence, to solve their goals with a creative approach.

The second block of the methodology proposes to study the ways in which cadets' professional activities are regulated in voyage conditions. These are the guidelines that guide and from which a person starts in their work, what regulates their activities. Thus, among the study sample, 43% of respondents have a low, 36.3% average and 20.7% high level of the value regulation indicator. With a high level of the indicator, a person's activity is regulated by the motivational components of values and serves as the basis for motivation. This is the highest degree of motivation. Poorly developed value regulation is a sign of an unformed motivational structure and a lack of understanding of the purpose of their activities in the future, its significance for themselves and society. Emotional regulation of 33.2% of respondents is low, 40.2% is medium, and 26.6% is high. If the values are high, this indicates a developed emotional support for the activity of motives related both to the level and direction of their arousal, and to real worries. Poor development can indicate non-emotional variability as a gratuitous and unjustified change in mood, a lack of understanding of the connection between one's goals and the emotional experiences that accompany behaviour. Social regulation in 19.4% of respondents is low, 46.5% is average, and 34.1% is high. This indicator indicates the degree of influence of the social environment on the individual, their drives and desires. If the level is high, then the person is strongly guided by the opinion of the environment and sets their benchmarks and goals in accordance with the social framework and standards of normality and success. If the indicator is low, then the person rarely pays attention to social postulates and builds their path rather as a loner, separated from the rest. Volitional regulation in 21.4% of respondents is low, 54.2% is medium, and 24.4% is high. High values indicate excellent management of behaviour by one's own consciousness, namely by mobilising volitional efforts. Such cadets are described as responsible, independent in decisions and initiation of actions, their implementation and control. Respondents with low values are weak-willed, rarely take matters into their own hands, they are changeable and sluggish, indecisive and often inactive. Information regulation in 35.5% of respondents has a low, 33.3% average, and 31.2% high level. At a high level, a person is guided by information and their cognitive abilities. During work, when a certain information flow is received, this will lead to the actualisation of the motive. In other words, such respondents regulate their activities, their methods and intensity, depending on the information they receive, making adjustments, if necessary, to the final goal and form of work. If the values are low, then a person rarely pays attention to important information needed to achieve their goals, and

in their professional activities they do not know how to use new data to correct their behaviour and actions.

Study of sailors' health and productivity by E.A. Schmi-ed *et al.* (2021) found that a third of seafarers frequently experience mental health problems ($n = 26$; 28.9%), half have symptoms of depression ($n = 14$; 53.8%), a third have symptoms of anxiety ($n = 7$; 26.9%), and a third of cadets rate their mental health as unsatisfactory ($n = 9$; 19.2%). A third of seafarers consider the level of occupational stress excessive ($n = 35$, 38.9 %), but among the reasons often indicated is separation from the family, conflicts between work and family obligations. Productivity is also recorded as an adaptation to working conditions in several aspects – cognitive and physical. When considering the factors of personality adaptation, it is worth paying attention to the study by Ye.V. Karpenko (2013) and M. Houser *et al.* (2022). They present the results of an empirical study of the influence of motivational compounds on adaptation. The study showed that the success of adaptation is interconnected with the communicative and behavioural potential, and with neuropsychological stability, moral and value-based behavioural regulators.

Results of the study of psychological factors of social adaptation by I. Haletska & M. Klimanska (2019) showed a correlation between adaptability and self-efficacy and a person's mental well-being. Thus, associations with neuroticism, extraversion, openness to new experiences, conscientiousness, pessimism and optimism, emotional lability, anxiety, and rigidity were recorded. It also indicates a significant relationship between individual adaptation and indicators of self-reward as a belief in the availability of resources that are important for a person and the possibility of their timely use. Confirmation of the correlation of adaptability with mental resilience, optimism and pessimism, anxiety, mental stress, and emotional resilience is present in the study by L.V. Stepanenko (2021). The researcher also pointed out a direct correlation between the adaptive properties of a person and their courage in social contacts and responsibility. The study of psychosocial factors of successful adaptation in adults by M.G. Jiménez Ambriz *et al.* (2011) confirmed that indicators such as self-esteem, optimism, internal regulation, and self-control mediate the negative effects of stress, thereby providing better individual adaptability. R.M. Shamionov *et al.* (2014) focused on indicators of motivation and understanding the purpose of one's own activities as a catalyst for adaptation to any conditions that it imposes.

T. Khraban (2022) pointed to the correlation of personality adaptability with its psychological well-being, which is influenced by personal determinants, in particular self-acceptance, self-esteem, autonomy, independence, purposefulness and the development of a motivational factor as an understanding of the goals and motives of professional activity carried out by a cadet. A.K. Ledford *et al.* (2020) paid attention to the factors of psychological resilience in the conditions of marine training and work, because the conditions are non-standard for humans and require special

adaptation to functioning at different levels and activities in them. There is a separate physical predictor of adaptation to stressful conditions, these are indicators of the vegetative and psychophysical, hormonal plan, and a psychological predictor as mental stability, endurance, perseverance, concentration on success.

M. Nordmo *et al.* (2020), investigating endurance and the causes of poor sleep quality in sailors, found that daily performance is influenced by several main factors. This is endurance as mental resilience and sleep quality. In turn, the quality of sleep correlates with the endurance indicator, which indicates that the more stable a person is, the better their recovery rates will be – physical and mental, and, accordingly, the more successful their adaptation in extreme and unknown conditions will be. C. Baglioni *et al.* (2016) and N. Cellini *et al.* (2017) indicate that sleep quality disorders are strongly associated with neuroticism and emotional regulation, affecting a person's mood and well-being. In addition, sleep disorders contribute to interpersonal conflicts and hyperexcitation, which can manifest as increased involvement in activities or as maladaptive behavioural strategies, in particular, taking sedatives or alcoholic substances.

Thus, the results of an empirical study presented in the paper highlight the relationship between psychophysiological and individual psychological parameters with individual adaptability, including in a professional context. Psychophysiological indicators include the level of physical fitness and endurance, the corresponding state of physical and mental health, psychological training, psychological readiness and stability. Individual psychological indicators include the level of responsibility and determination, independence, mental readiness, motivation and interest in the chosen profession, the correlation of personal values with the ideology of the profession and the employer organisation. The interdependence of indicators of readiness for changes, which are partially determined by the psychophysical state of the individual, is confirmed. It can be argued that these individual psychological indicators are to a certain extent determined by well-being. The greater the number and frequency of manifestation of neuroticism, the less inclined a person becomes to adapt, that is, becomes less interested and optimistic, more despondent in their abilities that will help to cope with challenges in their personal life and professional activities. As the study showed, there is an urgent need for psychocorrective intervention in the internal organisational processes of the working environment of cadets during voyage, since the work space in which cadets are located is quite stressful and requires optimisation to improve the indicators of psychophysical and psychoemotional well-being of employees.

CONCLUSIONS

It was established that the psychological stability of cadets on the voyage is influenced by their level of passion, resourcefulness, optimism, leading motives of professional activity, in particular, the motive of life support and self-realisation. Adaptability and tolerance to ambiguity are affected by the level of neuroticism and confidence, which are also inter-related. Disturbances in health, in particular in terms of exhaustion, emotional and vegetative instability, anxiety and fears, and maladjustment, affect the effectiveness and quality of value, emotional, volitional, social and informational regulation. Thus, the degree of depletion of psychoenergetic resources can affect how brave, determined, and confident a person will feel. Violations of the regulation of the volitional sphere are observed with excessive optimism, undeveloped adaptability, and in the absence of tolerance and calmness in conditions of uncertainty. Emotional instability is accompanied by a loss of confidence in the correctness and correctness of their decisions and in themselves as a whole. With an increase in physical discomfort, sleep disorders, with an increase in fears and anxiety, and with the appearance of addictions, there is a decrease in interest and enthusiasm for their activities. In addition, if cadets experience body discomfort and a malfunction in the body's functionality, this reduces their faith in future success. Sleep disorders lead to feelings of indecision and doubt, hesitation about the decisions made. When the degree of anxiety increases and many fears arise, there is also a decrease in self-confidence indicators. A tendency to various addictions, the use of sedatives, etc., indicate a low adaptability of the individual, since it does not imply an effective and truly solving a problem situation, but only an escape from it.

A study of individual psychological parameters of cadets' adaptability showed a general tendency to neuroticism, while half of the respondents have too high or low self-confidence. The most common symptoms among cadets are sleep disorders, addiction to sedatives or alcohol, vegetative complaints, and symptoms of psychophysical exhaustion. Almost half of the cadets have difficulties with adaptation, violations of value, information and emotional regulation, it is difficult to react to situations of ambiguity, and feel indecisive. The prospect of further research is seen in detailing the scheme of vectors of development of adaptability of cadets in voyage conditions, developing and testing a psychological plan for correcting individual psychological parameters associated with personality adaptation.

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CONFLICT OF INTEREST

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Взаємозв'язок індивідуально-психологічних чинників адаптації кадетів в умовах рейсу

Анотація. Актуальність дослідження зумовлено необхідністю у поновленні даних щодо специфіки діяльності моряків-кадетів у зв'язку зі стрімкими змінами організаційної структури сучасного суспільства та розуміння ролі даної професії у ньому. Метою статті було розкриття психофізіологічних та індивідуально-психологічних детермінант адаптації та їх взаємообумовленості у контексті професійної діяльності моряків-початківців. У роботі застосовано методи теоретико-методологічного аналізу, психодіагностичні методи опитування та метод кореляційного аналізу Пірсона. У результаті теоретичного аналізу встановлено чотири групи факторів професійної адаптації: психофізіологічні, індивідуально-психологічні, соціально-психологічні та організаційно-структурні. На основі цих факторів організовано емпіричне дослідження, у ході якого виявлено взаємозв'язок між показниками психологічної стійкості, впевненості в собі, адаптивності та толерантності до двозначності. Визначено, що психологічна резильєнтність пов'язана з параметрами пристрасності, винахідливості, оптимізму та рівнем вираження мотиваційних компонентів професійної діяльності кадетів, детермінується мотивами життєзабезпечення та самореалізації. Порушення у самопочутті, зокрема у показниках виснаження, емоційної та вегетативної нестабільності, тривоги та страхів, дезадаптивності впливають на ефективність та якість ціннісної, емоційної, вольової, соціальної та інформаційної регуляції. Найчастіше серед кадетів в рейсі зустрічаються порушення у симптомах самопочуття, що формують собою вегетативну та емоційну нестійкість, порушення сну, менш виражені симптоми дезадаптації як схильності до залежностей, тривоги та страхів, найменше проявляються на високих рівнях симптоми психофізичного виснаження та порушень волі. Стаття робить внесок у психологічну науку щодо питань професійної та особистісної адаптивності особистості в екстремальних умовах діяльності. Робота має практичну цінність для соціологів, педагогів, психологів, психотерапевтів та медиків, які можуть сприяти вирішенню проблем дезадаптації у трудовій сфері

Ключові слова: психологічна стійкість; впевненість; готовність до змін; мотивація; професійна діяльність; регуляція діяльності