

Emotional Intelligence of Employees of Risky Professions: Theoretical and Empirical Discourse of the Research

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Abstract: *A professional, working in dangerous conditions, requires a high level of steadfastness to stress, caution, and responsibility. The goal of the research is aimed at theoretical and empirical disclosing of the essence of emotional intelligence in employees of risky professions. Emotional intelligence is seen as a leading personal competence and ability. The structural components of emotional intelligence are analyzed in detail from the points of view of well-known foreign and domestic psychologists. The integrative indicators of emotional intelligence have been empirically revealed in rescue workers and patrol officers. In our study participated 1000 respondents with the same length of service in 4 years, in particular: firefighters (n = 500); patrol officers (n = 500). The psycho-diagnostic tools included: Hall test, Russian version of the test of emotional intelligence of J. Meyer, P. Salovey, D.Caruso MSCEIT-V2.0 in the adapted version of O. Sergiienko, I. Vetrova and the method of studying the professional identity of L. Schneider. The respondents showed a low level of development of emotional intelligence. However, the differences were also revealed, in particular, it is more clearly for firefighters to understand their own emotions, but for law enforcement officers the practical use of emotions is in priority. At the same time, the common problem is inability to manage own emotional experiences.*

Keywords: *structure of emotional intelligence; emotional sphere; professional activity; professional identity.*

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Introduction

Globalization and transformational changes in a society cause actualization of the problem of individual's emotional life. At the same time, in these conditions, the problem of the emotional intelligence of the individual, who works in special conditions, has been raised. That is why the present time requires from the person to possess "soft skills", in particular emotional intelligence, which will allow considering it effective and successful in a professional field.

Therefore, a professional, working in dangerous conditions, requires a high level of steadfastness to stress, caution, and responsibility. In contrast, there is a high level of emotional intelligence that allows the individual to understand the affective realm of other people and, to first and foremost, understand himself/herself, his/her experiences and feelings. In difficult and dangerous situations, a personality, having emotional intelligence, will make it easier to overcome the obstacles of life and professional orientation.

The contemporary paradigm of the world in professional discourse requires the individual to find a reasonable balance between rational and irrational, emotional and thinking, cognition and feelings. A person working in extreme, risky conditions is constantly confronted with expressing his and other peoples' emotions, and accordingly, he must be able to find out his dominant emotions and manage them, because it will ease the pressure that is constantly present in this kind of activity.

Updating the topic of emotional intelligence in this context is undeniable. Theoretical and empirical research analyzes the theoretical approach to the interpretation of the concept of "emotional intelligence" and the leading modern theories of emotional intelligence, namely: emotional and intellectual abilities by Salovey et al. (2004), emotional competence by Goleman (2019), Barbey et al. 2014, non-cognitive theories of R. Bar-On, a four-component theory of I. Andreieva. Theoretical analysis of the problem of "emotional intelligence", its structural components is scientifically substantiated and confirmed by the need to develop indicators of emotional intelligence as a fundamental basis for professional self-realization and achieving high results in professional activity. It is important to note that emotional intelligence is the motivator of intellectual and cognitive processes of a personality. For a person recognizes and understands his/her emotions, this in the future allows him/her to constructively interact with both himself/herself and the external world.

The world scientific elite also did not stay out of covering this issue. In 2016, the Davos World Economic Forum identified ten personal skills

that would be important in the near future, including emotional intelligence, people management, cognitive flexibility, critical thinking, etc. (Gray, 2016). Emotional intelligence holds the place of honor in this list. Even in the context of educational reform, the development of emotional intelligence in children is affected. According to Brackett (2017), a director of the Yale University Emotional Intelligence Development Center, emotionally educated children are able to make the society a more psychologically healthy and enjoyable place to live.

Studies of the issue in psychological perspective began quite recently - in the second half of the twentieth century. This concept is introduced in the scientific works of such American researchers as Goleman (2019), Caruso & Salovey (2016), Devid (2018), and others.

Practitioner psychologists Breus (2016), Dubravin (2019) emphasize that emotional intelligence is a leading factor in personal and professional development.

A multi-vector approach to the interpretation of the concept of "emotional intelligence" is traced. We distinguish the following leading branches of theoretical and experimental development of this problem: understanding of emotional intelligence and its leading structural elements; emotional intelligence as an adaptive function of the personality's organism; the research of the ways of development of emotional intelligence; interpretation of emotional intelligence in the context of professional activity. The basis for distinguishing the theory of emotional intelligence is the works of the American scientist G. Gardner (2011), who stated the existence of varieties of intelligence.

Professional realization also becomes an urgent problem in the context of psychology of employees of risky professional activity in special conditions. The stages of professional formation are distinguished in professional activity. Modern post-Soviet and Ukrainian scholars pay special attention to the formation of the employee's professional identity. Scientists rely on the principle of systematic and structured nature of psychological phenomena and explanation of the professionally complex conditions of the activity.

According to the classification of professions in Ukraine and the integral estimates, the category of workers who work in special conditions and are considered risky includes: rescuers, law enforcement, military personnel, astronauts, sailors, pilots, miners, security guards, drivers, athletes, and others.

These employees work in special conditions that are considered extreme in nature, associated with high-intensity stressors, may be life-

threatening to the individual and directly related to life-threatening or health-threatening risks during and after performing professional duties. Employees of risky professions are confronted with aggression, anger, resentment, conflicts, threatening working conditions, all of which are traumatic factors.

Studying the psychological nature of the activities of workers of risky professions requires consideration of such a psychological parameter as emotional intelligence, since this type of activity is emotional, including high level of stress and responsibility, increased violent form of communication, danger to life and mental health, etc. That is why a detailed analysis of the professional realization of the personality of risky professions should be in the context of revealing the inner potential of the individual, namely emotional intelligence as a fundamental factor of a professional effectiveness of a specialist.

Foreign researchers, including Caruso & Salovey (2016), Mayer (2004), considered emotional intelligence as the ability of an individual to understand himself, express his emotions, and manage them in view of the intellectual component. Instead, Bar-On (1997) understood emotional intelligence exclusively as a non-cognitive ability, a competence of the individual that helps to overcome difficult life circumstances.

The majority of scientists suggest the author's models of emotional intelligence and the structural components of this phenomenon. Let's analyze the most famous of them. Thus, the structure of Bar-On's (1997) emotional intelligence contains the following components:

1) Intra-personal sphere. This component reveals the ability of the individual to understand himself, manage his own affective sphere, as well as the tendency to self-analysis, assertiveness, independence, self-esteem and self-realization.

2) Interpersonal sphere. This structural component of emotional intelligence indicates how a person interacts with the environment, establishes relationships, and creates new connections. In order for this to work, one must have empathy, social responsibility and interpersonal relationships.

3) Adaptability. This characteristic allows you to outline the degree of the individual's flexibility, the speed of escape from difficult life situations.

4) Stress management. It is an important structural component that indicates an individual's ability to withstand stress and control his or her impulses.

5) General mood. This component of emotional intelligence incorporates such components as happiness and optimism.

In contrast to this model, Salovey and Mayer (1990) distinguish 4 leading components of emotional intelligence, namely:

1) Understanding emotions. This component indicates how an individual differentiates the origin of his emotion, its source, the ability to transform an emotion, to see the relationship between a word and an emotion.

2) Accuracy of evaluation and expression of emotions. The importance of identifying what information (of the inner and outer world of the individual) each emotion carries.

3) Consideration of emotions in the mental activity of a man, that promotes the formation and expression of positive emotions and thoughts in total.

4) Managing emotions as a leading component that contains information about a person's experiences, frustrations, needs, and more. This ability allows the individual to understand and cognize himself, his inner world.

A psychologist, scientist, publicist Goleman (2019) also suggests his own structure of emotional intelligence, which consists of 4 components, namely:

1) Emotional self-awareness as the ability to listen to oneself, one's inner ego.

2) Self-control. According to the scientist, it contains the following components: self-confidence, optimism, initiative, openness, ability to restrain emotions, adaptability.

3) Social sensuality. This concept describes the level of empathy of the individual, the ability to empathize.

4) Relationship management, as a leading component of emotional intelligence, includes the following indicators: inspiration, influence, conflict resolution, teamwork and collaboration, promoting change, and more.

The post-Soviet scientist Andreieva (2006) also proposes her structure of emotional intelligence, which contains the following components:

1) Recognition of own emotions. It is the ability to understand one's feelings and emotions in the process of life.

2) Owning your emotions. It is the ability to control one's emotions in stressful and difficult situations.

3) Understanding other people's emotions. In order to increase communication efficiency and interpersonal interaction, it is important to understand the states and emotions of other people. That is the evidence of high empathy of the individual.

4) Self-motivation. It is the ability of the individual to create a positive emotional and psychological background for interpersonal interaction.

Thus, having analyzed the structural components of each of the theories of emotional intelligence, we can conclude that they trace the relationship, namely the ability to understand their emotions, themselves, their inner world, and, at the same time, this will ensure understanding of the members of a society. We tend to view emotional intelligence as a personal feature and the ability to realize, understand and accept our emotions and experiences, which will help to manage them effectively.

As the Ukrainian psychologist Zaritskaya (2018) noted, another researcher, who deals with the problem of the affective sphere of a personality and stress, namely Lazarus (1991) distinguishes external and internal factors that cause the evaluation of emotions. The scientist notes that external factors include stressful situations. As threats at the primary level of emotion assessment, the following indicators are considered: the relationship between the source of the threat and the forces that restrain it, the inevitability of the collision, and ambiguity of the threatening situation. As for the secondary evaluation of emotions, the scientist distinguishes location of the threat, effectiveness of alternative protective actions, and dependence on the situation as means of protection. According to R. Lazarus (1991), the internal factors include: strength and nature of emotions, confidence in the environment, intellectual resources, education and experience. The strength and nature of the threat motivation, ego-resources, and protective installations also can be considered as threats. Different aspects of the problem under study are covered in the works of many scholars (Bezliudnyi, 2019; Gerasymova, 2019; Nerubasska & Maksymchuk, 2020; Melnyk, 2019; Sheremet, 2019).

Thus, the scientist notes that stress acts as a cognitive component, since those beliefs, expectations, perceptions and evaluations are at the heart of the response to threatening stimuli.

The relation between emotional intelligence and neuropsychology. In the middle of the twentieth century, the research of the intellectual sphere and emotional intelligence stood out. Antonakis & Dietz (2010) note that research in neuroscience should focus on identifying physiological markers or certain areas of the brain that are not related to intelligence, which will predict the performance of socio-psychological tests (nonverbal ability to decode or interpersonal sensitivity).

Barbey et al. (2014) indicated that emotional intelligence is an important component of general intelligence. Scientists admitted that

emotional and social intelligence is more limbically tactical for immediate behavior suited more for survival and adaptation. Individuals with a high level of emotional intelligence have an excellent understanding of their own emotions and feelings, which helps her to effectively manage their emotional sphere. Their behavior in society is more adaptive, they more easily achieve their goals in interaction with the environment. They investigated the neural architecture of emotional intelligence and examined the degree to which this network engages systems for key competencies of psychometric intelligence (verbal comprehension/crystallized intelligence, perceptual organization/fluid intelligence, working memory and processing speed) and personality traits (extraversion, agreeableness, conscientiousness, neuroticism and openness to experience).

Hawkins & Blakeslee (2004) develops a theory about human brain works and explained different between computers and intelligent. Modern science explains the mechanism of action of emotional intelligence by the theory of mirror neurons, which are able to reflect the state and actions of other beings. Indirect confirmation of this theory is that people who have certain neurophysiological disorders have reduced or no ability to empathize with the feelings and emotions of others. They often lose the ability to distinguish between their own emotions and feelings.

According to the results of neuropsychological research, everyone has an innate emotional intelligence. The problem is the wrong, or lack of its development - namely, the lack of examples of emotional competence in the immediate environment, the frequent taboos of feelings and emotions, the desire to educate "iron people" (Storrs & Kriegeskorte, 2019).

The object of the research is the emotional intelligence of the individual.

The goal of the article is aimed at theoretical and empirical disclosing of the essence of emotional intelligence in employees of risky professions.

To achieve the goal determined the following **tasks** are to be fulfilled:

1) Analyze the interpretation of the concept of "emotional intelligence" and identify the leading structural elements of this psychological phenomenon.

2) Empirically explicate emotional intelligence and its interrelation with the professional activities of employees of risky professions.

Materials & methods

Thus, an empirical study of the emotional intelligence of a person working in risky conditions acquires peculiar importance and weight in the context of his/her professional activity and its specificity. In our study participated 1000 respondents with the same length of service in 4 years, in particular: firefighters (n = 500); patrol officers (n = 500). The psychodiagnostic tools included: Hall test (2007), Russian version of the test of emotional intelligence of Salovey et al. (2004) MSCEIT-V2.0 in the adapted version of Sergiienko & Vetrova (2009) and the method of studying the professional identity of L. Schneider.

The Hall test (2007) is designed to identify a person's ability to understand emotional reactions in interpersonal interaction and manage his own affective realm. The test is able to identify 2 levels of emotional intelligence: partial and integrative. The partial indicator is determined by the numerical value on each scale, namely: emotional awareness, managing one's emotions, self-motivation, empathy, and recognizing other people's emotions. The integrative indicator is determined by the sum of the answers to all the test questions.

The Russian version of the test of emotional intelligence of Salovey et al. (2004) MSCEIT-V2.0 in the adapted version of O. Sergiienko, I. Vetrova (2009) is the technique of studying that contains 8 sections, where for each component falls 2 sections. Let's analyze it in detail.

1) Perception, evaluation and expression of emotions, or identification of emotions - sections A (measurement of persons' perception) and E (measurement of perception of pictures).

2) Using emotions to increase the efficiency of thinking and activity - sections B (measures the ability to assimilate your current experience, describe your feelings to a certain person) and F (measures the ability of a person to describe his/her emotional states).

3) Understanding and analyzing emotions - sections C (studying the understanding of the flow of emotions over time, as well as understanding how emotions follow one another, change each other) and G (measuring the ability to distinguish between mixed and complex feelings).

4) Conscious management of emotions for personal growth and improvement of interpersonal relations - sections D (management of own emotions) and H (management of other people's emotions). The respondents were asked to imagine themselves at the site of the heroes of their stories and evaluate options for further actions.

To identify the status of professional identity of the law enforcement officer and firefighter was used the methodology of studying professional identity, based on the principle of direct and chain associative test. Initially, Schneider (2007) provided the subjects of the research with two stimulus words: "professional" and "non-professional", to which each of them noted 10 associative reactions. Later, it was suggested again to write down any 10 words on these 10 stimulus words.

Then all the associative reactions (primary and secondary) of the subjects were reduced to a single and further processed. The word groups that formed the "nest of associations" were replaced with one word. Words that were encountered in the two series of the study were excluded, explicit (open) associations were deleted, and random associations were also removed from the general set. Finally, key word associations on word-stimuli were left behind. Thus, the leading type of professional identity has been determined, and their author identifies five of them: premature identity, diffuse identity, moratorium identity, achieved positive identity, pseudo-positive identity (2007).

Results

According to L. Schneider's work "Methodology of the Study of Professional Identity" (2007), it is found that 92% of respondents-firefighters identify themselves as professionals, that is natural, as they are faced with constant critical situations in real life, and this promotes testing in typical, not standard cases, where you need to show your professionalism. Instead, 8% of firefighters do not consider themselves professionals. We tend to associate this with the complexity of adapting to constantly changing conditions of activity and underdeveloped capacity of functional systems of the body. It also demonstrates dissatisfaction with their profession and own self-efficacy.

Similar results were found in law enforcement officers: 90% identify themselves as professionals and 10% identify themselves as non-professionals. This is explained by the recent changes and reforms in the law enforcement system, where the rebranding and re-establishment of post-Soviet institutions took place. However, these transformations tend to continue, that may adversely affect the professional image of the police officer.

At the same time, it has been found that the positive status of professional identity prevails in all respondents. This demonstrates that, according to the criteria of mature identity attainment, our respondents feel

the importance and weight of the work they perform, that is a social side of their personal lives. As for the internal component, it is first and foremost about the maturity of the mechanisms of embodiment and identification, that is a sign of an adequate evaluation of oneself in a society and in the professional field.

The results of the Hall test (2007) are shown in Table 1.

Table 1. Hall average (in points)

Type of activity Scale	Firefighters	Policemen
Emotional awareness	24 (average level)	25 (average level)
Management of emotions	16 (low level)	15 (low level)
Self-motivation	24 (average level)	19 (low level)
Empathy	22 (average level)	19 (low level)
Managing the emotions of others	14 (low level)	13 (low level)
Integrative level EQ	20 (low level)	18,2 (low level)
Partial EQ	8 (average level)	6 (low level)

Let us analyze the low rates. In particular, the management of their emotions by firefighters and police officers is 16 and 15 points, respectively. This indicates that in difficult working conditions it may lack the time to recognize their true emotions, experiences and feelings, and this is triggered by the inflexibility of the affective sphere, thus needs development.

Low self-motivation was found in patrol officers (19 points). For this category of respondents, it is not peculiar to become comfortable with the environment, which is a sign of a superficial attitude to themselves, a lack of habit to listen to the inner voice. Law enforcement also found a low level of empathy (19 points), which is evidence of a lack of empathy with the emotions and feelings of others. Of course, in such an activity, this is disadvantage rather than advantage.

It seems logical that firefighters and law enforcement officers have a low level of control over the emotions of others (14 points and 13, respectively), because without understanding his/her experiences the individual is not able to track and calibrate the affective realm of others.

Respondents' overall integrative index of emotional intelligence is low and therefore requires development and correction. With regard to the partial level of emotional intelligence, the firefighters are traced to an average level of their development, whereas the law enforcement officers - to a low level.

The emotional intelligence test of J. Meyer, P. Salovey, D. Caruso (2004) MSCEIT-V2.0 in the adapted version of O. Sergiienko, I. Vetrova (2009) is the next one to be analyzed (Table 2).

Table 2. The results of the diagnosis of emotional intelligence using MSCEIT test, D. Mayer, P. Salovey, D. Caruso (in%)

Level Scale	High	Average	Low
Identification of emotions	3	45	52
Use of emotions	3	30	67
Understanding emotions	12	24	64
Managing of emotions	2	36	62
General EQ	1	29	70

Therefore, according to the results of the MSCEIT test, the majority of respondents show a low level of emotional intelligence development. 29% of the respondents show an average level of integrative intelligence, 70% - low level and 1% of respondents has a high level of emotional intelligence. An indicator of 12% in terms of understanding emotions is interesting, as indicates that some of the respondents understand what emotions they are experiencing. The most difficult thing for the respondents is to identify one or another emotion, recognize its expression, features, etc., since only 3% of the respondents are capable of it.

In terms of occupational differentiation, virtually similar results have been found, namely: firefighters have a better understanding of their affective realm, the peculiarities of expressing emotions over time, and law enforcement officials make better use of emotions in life.

Thus, operating the theoretical and empirical design of the study, we believe that emotional intelligence is one of the leading properties of professional activity, especially in risky professions, as it characterizes its effectiveness. However, in the realities of extreme activity, indicators of emotional intelligence need to be developed and refined in order to become a more efficient worker and improve mental health.

The SPSS 22 software package was used for statistical analysis, which allowed us to process the data obtained. Let us analyze the main correlation relationships shown in Fig. 1.

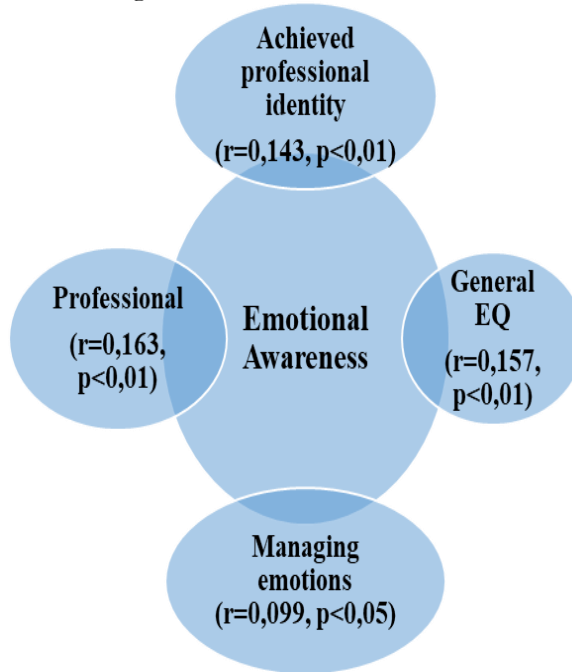


Fig.1. A correlative pleiads of interconnections between the leading components of emotional intelligence and occupational metrics in risky professions.

The scale "emotional awareness" is in positive correlation with the scales "professional" ($r = 0,163, p < 0,01$), "achieved professional identity" ($r = 0,143, p < 0,01$), "general EQ" ($r = 0,157, p < 0,01$), "emotion management" ($r = 0,099, p < 0,05$). Such a relationship demonstrates that a person who positions himself / herself as a professional must possess a high level of emotional intelligence, be able to manage his / her emotions and states, and most importantly identify them first. The presence of these indicators in the aggregate will be reflected in the achieved professional identity as a congruent trait of the employee of the risky profession.

In addition, a positive correlation was found between the scales of "use of emotions" and "self-motivation" ($r = 0,314, p < 0,01$). This means that the person in life is self-motivated, correctly responding to these or those circumstances, and oriented internally to feel the surrounding reality and himself/herself above all, that is reflected in the effectiveness of interpersonal interaction and profession. Such interaction of indicators of

emotional intelligence will promote attraction of external and internal resources of the personality.

At the same time, there is a negative correlation between the “professional identity achievement” and “empathy” scales ($r = -0.124$, $p < 0.01$). Such a relationship is quite natural, because the respondents, who participated in the study, are workers of risky professions, where you need to be rigid and determined, and show the whole range of masculine traits, which does not imply empathy, social sensitivity, for its overexposure will lead to professional burnout.

Discussion & conclusions

At the same time, modern empirical studies reveal not only the positive aspects of the phenomenon of emotional intelligence, but also the negative ones. In particular, Scientific American columnist A. Blaszczak-Boxe (2017) notes that a high level of emotional intelligence increases the risk of stress, as emotional education forces the individual to take responsibility for things that he has nothing to do with, that promotes manipulation of others for the sake of personal gain. Another psychological study, published in the September 2016 issue of *Emotion*, conducted by Bechtoldt & Schneider (2016), reveals the role and importance of emotional intelligence in one's life. Namely, 166 male students received questions regarding the evaluation of their emotional intelligence. The results of the study showed that students with high level of emotional intelligence had increased stress scores several times during the experiment and took longer to recover. This indicates that individuals with high level of emotional insight are stressed and exhausted compared to other categories of respondents.

Taking this into consideration, there is still no clear correlation between specific conditions of activity and indicators of emotional intelligence. The structural components of emotional intelligence in employees of risky professions and their individual and typological virtues have not been sufficiently studied. This is our scientific originality. Because in similar scientific studies there was no emphasis on the emotional sphere and emotional intelligence of employees of risky professions.

Thus, the study of the phenomenon of emotional intelligence in workers of risky professions made it possible to analyze it from a theoretical and empirical perspective through the lens of affective and professional orientation of the individual, the idea of one's emotions, his/her awareness and ability to manage them. It is the development of emotional intelligence

as "soft skills" that will help to better understand oneself and others, especially in special conditions of activity, and this will reduce the level of stress and the overall complexity of the work performed.

The survey found that 92% of firefighters identify themselves as professionals, and 90% are among patrol officers. At the same time, there is a percentage of respondents in both subgroups who feel insecure and uncomfortable in the professional environment that complicates the process of professionalizing and identifying oneself as a professional. Indicators of emotional intelligence in employees of risky professions are revealed at the following levels: 1) in firefighters: emotional awareness (average level); managing own emotions (low level); self-motivation (average level); empathy (average level); managing emotions of others (low level); integrative level (low level); partial level (average level); 2) in law enforcement employees: emotional awareness (average level); managing own emotions (low level); self-motivation (low level); empathy (low level); managing emotions of others (low level); integrative level (low level); partial level (low level). According to the MSCEIT test, 29% of respondents have an average level of integrative intelligence, 70% are low and 1% of respondents have a high level of emotional intelligence. Rescue workers have a better understanding of their emotional realm than they do of law enforcement agencies that use their emotions in constructive and destructive forms. Statistical analysis allowed us to distinguish the correlation pleiads of the interconnection of professionally oriented components and emotional intelligence, that gives the grounds to admit that there is a close correlation between the work performed and the emotional states and personal experiences.

Explication of the results of the empirical study suggests that it is important for law enforcement and firefighters to express their emotions, but there are problems with their identification and ability to manage them. The low results on the indicators of emotional intelligence allow us to emphasize that this personal property requires special study and approach in the development even in extreme and risky professions.

Thus, the study of the index of emotional intelligence in employees of risky professions shows that respondents lack the ability to identify emotions (own and others), manage their states, which would help to increase the level of professional efficiency.

The prospect of further scientific exploration is seen in the development of a psycho-correction program for the development of emotional intelligence in workers at risk.

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