

# *Peculiarities of Stress Manifestation in Emercom Employees*

Platonova Z.N.

*Institute of Psychology*

*name of organization*

*Northeastern Federal University*

*Yakutsk, Russia*

[zplatonova@mail.ru](mailto:zplatonova@mail.ru)

**Abstract.** The purpose of this study is to research the characteristics of the occupational stress manifestation, one of the most pressing problems of extreme psychology. Furthermore, this problem is highly relevant for specialists of extreme professional activities (employees of security agencies: submariners, cosmonauts, employees of special divisions of the Ministry of Internal Affairs of Russia, firefighters and rescuers of the EMERCOM of Russia). The author considers stress as the ability to overcome, manage one's behavior under extreme conditions (Derkach A.A., 2005). The article attempts to attribute significant psychological personality traits that provide stress resistance to professionally important psychological qualities of an individual which take their specificity depending on the type of professional activity. The author, relying on the methodological principles of acmeology, considers a person as constantly evolving subject at different levels of professionalism and success of professional activity (Derkach A.A., Zazykin V.G., Markova A.K., 2000). The professional activities of specialists of extreme professions take place under difficult and non-typical conditions with a threat to life and health, when there is a time limit associated with high responsibility for the lives of other people, etc. There is often violation of adaptive and coping mechanisms of the body. One of the manifestations of such disorders is occupational stress. The identification of stress manifestations in specialists of different professions and activities of the EMERCOM is the basis for an effective prediction of their behavior, and, therefore, the success of their activities under extreme conditions.

**Keywords:** *professional activity, stress, stresses resistance, working capacity, professional burnout.*

## I. INTRODUCTION

The problem of psychological resistance to stress of employees is professionally significant for the EMERCOM, since it can often depend on the lives of affected individuals and the employees themselves.

The ability to overcome stress and manage one's behavior under extreme conditions is important criteria in the acmeological culture of the profession [1]. Significant psychological qualities of a person that provide stress resistance belong to the professionally important psychological qualities of a person, which take their specificity depending on the type of professional activity.

The professional activity of the EMERCOM formations often takes place under the influence of adverse and sometimes extreme environmental and climatic factors, with limited timeframe, uncertainty of events, difficult

operational situation and is accompanied by a high degree of responsibility for the lives of others, a perceived sense of threat to life and health, etc. Numerous influencing factors of varying duration and intensity can cause various kinds of health changes in rescuers, ranging from functional changes (signs of physical and psycho-emotional overwork - insomnia, irritability, anxiety), to pre-or pathological disorders (psychosomatic or somatic diseases). The basis of both changes is the violation of the organism's adaptive and coping mechanisms. One of the manifestations of such disorders is occupational stress.

The subject's behavior under extreme situations is determined by professional competence, motivation, as well as personal psychological competence to overcome difficulties. The effectiveness of professional behavior depends on the subjective understanding of the situation [2]; thus, the identification of stress patterns among specialists in different professions and activity types of the EMERCOM is the basis for an effective prediction of their behavior, therefore, the success of their activities under extreme conditions.

The goal of the research is to identify the psychological and acmeological features of stress manifestation, depending on the activity type of employees of the EMERCOM.

The object of the research is the employees of the Fire Service and the Rescue Service of the Sakha Republic (Yakutia). The Fire Service sample was composed of male fire service officers aged 21 to 29; the second sample was composed of male rescue personnel aged 22 to 33. The respondents were divided into 2 groups: group 1 with 0.5 to 2 years of work experience; group 2 with 3 to 5 years of work experience;

The subject of the study is peculiarities of stress manifestation in EMERCOM employees.

As a basic working hypothesis, it was suggested that the level of occupational stress may depend on the length of service in the EMERCOM.

## II. METHODOLOGICAL FOUNDATIONS

The term "stress" (from the English. Stress - pressure, stress) is learned from technology, where this word is used to denote the external force applied to a physical object and causing its intensity, i.e. temporary or sustained change in the structure of the object. In physiology, psychology, medicine, this term is used to denote a wide range of human

conditions that appear in response to various extreme influences. There is no clear and uniform definition in the problem of studying the phenomenon of occupational stress. The development of the concept of stress has found its reflection in a whole chain of its theories and models, significantly differing from each other and at the same time complementing and developing each other. For the first time, the concept of stress was formulated by the Canadian physiologist G. Selye, who understood stress as a nonspecific response of the body to various adverse effects of an endogenous and exogenous nature. G. Selye's stress theory [3]; R. Lazarus' cognitive theory of psychological stress [4]; research of Russian scientists V.A. Bodrova [5], L.A. Kitaeva-Smyk [6], A.B. Leonova [7], V.L. Marishchuk [8], N.V. Samoukina [9] et al. on the phenomenon of occupational stress;

**III. THE RESULTS OF THE STUDY AND DISCUSSION**

The study involved 60 employees of the Ministry of Emergency Situations aged 21 to 29 years old, with work experience of 0.5 to 5 years.

Based on the data obtained during the survey, the respondents were divided into 2 groups:

Group 1 - work experience 0.5 - 3 years;

Group 2 - 4 - 5 years. In the course of the study, the following results were obtained:

Distribution of respondents by groups depending on work experience (table 1)

Table 1 - Sample description

groups	number of people	average age	average work experience
1	40	25	1,5
2	20	27	4

In order to determine the level of occupational stress, the method of Occupational Stress Assessment Scale was carried out. According to this method, moderate and low level stress is observed for the absolute majority of employees in both groups, the ratios between the groups showed that the high stress level was found in group 1 (short work experience) and low stress level was found in group 2 (work experience from 3-5 years); It can be assumed that people with high work experience may have well-developed self-regulation, therefore, perhaps, their level of stress resistance is higher.

The subjective representation of the different states of reduced working capacity was detected using the method of differentiated assessment of working capacity - DORS. Average values for fatigue indices, monotonies, and satiety were determined: group 1 showed high figures for fatigue index and group 2 showed low figures. Group 1 also showed high figures of monotony index, group 2 showed low figures. In the satiety index, high figures were revealed in group 2 and low figures in group 1. It can be assumed that employees with work experience of 3 to 5 years have a higher stress resistance.

In order to identify the indicator of the emotional burnout syndrome formation, V.V. Boiko's method of diagnosing the level of emotional burnout was conducted, which confirmed that the stages of emotional burnout are not formed or are in the process of formation. However,

emotional burnout predominates more in group 2, which can be explained by the fact that during this period of work there is a final adaptation to the features of professional activity. Those who could not adapt, usually leave work (table 2).

Table 2 – The professional stress, health index and emotional burnout of representatives of two groups

indicators of average data on the results of methods	1 Group	2 Group
professional stress	15	13
health index	17	20
emotional burnout	9	10

No statistically significant correlation relationship was found between the indicators for assessing occupational stress, diagnostics of the level of emotional burnout and differential diagnosis of the states of reduced performance ( $r = 2,981$ )

To identify the relationship between stress tolerance and work experience in the EMERCOM, the Pearson criterion was used ( $r_s = 0.301$ ). The assumption about the relationship between the level of occupational stress and the work experience in the EMERCOM was confirmed: stress can be high for those with less experience, and low for workers with more experience. In this regard, we can say that the lower the stress, the higher the resistance to stress.

To assess the differences between the samples, the Mann-Whitney U-criterion was used, where  $U_{emp}$  equals 28 between the first and second groups, i.e., it is in the insignificance zone. According to the results of the study, we come to the conclusion that the level of professional stress can directly depend on the work experience of the EMERCOM employee: to be high - for those who have less experience, and low - for workers with high experience. The hypothesis that we put forward that the level of occupational stress directly depends on the length of service of an EMERCOM employee - the longer the experience, the higher the resistance to stress is confirmed.

The results of the study were discussed at a meeting of the Department of Psychology and Social Sciences of the Institute of Psychology, at the NEFU student conference, and the materials were submitted to the personnel department at the EMERCOM of the Sakha Republic (Yakutia).

**IV. CONCLUSION**

There are a number of factors contributing to the formation of stress at work: overload, light workload, conflict and ambiguity of roles, uninteresting work. When considering the psychological characteristics of the profession of the employee of the EMERCOM, it was revealed that the stress in this work activity was manifested in mental and somatic reactions to stressful situations.

The consequence of professional stress is the employee's professional burnout. The factor causing stress in this profession is the ability of the profession to deny problems; the certain feature is high self-control (especially when expressing negative emotions with the desire to suppress them), rationalization of the motives of employee's behavior, a tendency to heightened anxiety, etc. The most effective way to cope with stress, in our opinion, is

psychological stability, a low level of neuropsychic tension and a positive attitude towards professional activity.

Based on the material studied, with the help of selected methods, a study of occupational stress among employees of the EMERCOM was conducted. In the course of the study, the following results were obtained:

- According to the method of assessing the level of occupational stress there is low level of occupational stress throughout the entire sample;
- According to the method of differential assessment of health there are average values for indices of fatigue, monotony, satiety and stress;
- According to V.V. Boiko's method, the stages of emotional burnout are not formed or are in the formation stage.

It can be concluded that employees with a lower length of service do not have sufficient work experience, many situations are unfamiliar to them, there is little or no awareness of possible dangers and, as a result, they show high level of stress. EMERCOM employees with more experience may have lower level of stress because they are experienced; they are familiar with work situations and understand how to act under certain conditions. These findings apply only to the employees of the EMERCOM of the Sakha Republic (Yakutia).

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