

# Professional health and viability of EMERCOM employees

Stanovova Lyudmila  
Tver state University  
faculty of psychology  
Tver, Russian Federation  
[Stanovova.LA@tversu.ru](mailto:Stanovova.LA@tversu.ru)

Zakharova Olga  
Main Directorate of EMERCOM of Russia in Tver region  
senior psychologist  
Tver, Russian Federation  
[olga.zakharova.71@list.ru](mailto:olga.zakharova.71@list.ru)

**Abstract:** The article discusses with the professional health and vitality of rescuers of the Ministry of emergency situations. To this end, the study of professional health and vitality of rescuers of the Ministry of emergency situations through the study of their coping behavior, neuropsychological stability in stressful situations and psycho-emotional state was conducted.

**Keywords:** *viability (vitality), professional health, coping behavior, professional activity, emergency workers*

## I. INTRODUCTION

Nowadays the problem of ensuring and maintaining the professional health of specialists of extreme profile in modern realities is very acute. Their activities are associated with excessive physical and emotional stress, unpredictability and uncertainty of situations, constant increased readiness for emergency actions. We can fully relate rescuers of the Ministry of emergency situations to the category of persons who are exposed to long-term negative impact and professional stress. The activity of EMERCOM employees often takes place in unfavorable conditions, is associated with a constant risk of loss of health and life; there is a high responsibility for the life and health of others. Increased stress of the profession raises the problem of resource recovery, effective regulatory mechanisms that will optimize the impaired functional state. The only resource that can be relied on in this situation is often the high neuropsychological stability of the rescuer, and in fact, its viability. In the context of our study, viability is manifested in a person's desire to survive in deteriorating conditions; to become an individual, to assert themselves, find themselves, realize their potentialities and creative possibilities. This is the degree of adaptation of a person to life, to sharp fluctuations of living conditions. It is vitality that is defined as the universal ability of a person to maintain health and not to "break" in adverse living conditions [1, 2, 3,4].

The study of the problem of professional health and personal viability of employees of the Ministry of emergency situations allows to predict the negative manifestations of professional activity (deformation, destruction), to build psychological support of employees of the Ministry of emergency situations in order to preserve their professional health and longevity, relieve emotional stress and the formation of vitality.

## II. ORGANIZATION OF THE STUDY AND DISCUSSION OF THE RESULTS

### A. Objectives and methods of the study

The purpose of the study is to examine the level of occupational health and viability of the emergency workers.

To this end, in 2019 we conducted an empirical study in one of the fire and rescue units for the protection of the city of Tver was attended by 32 people, all firefighters-rescuers on duty guards aged 27 to 42 years, took part in the survey; the average length of their service – 12.6 years.

In the study we used the following methods:

1. The method of "Questionnaire Forecast»;
2. Method "Coping-behavior in stressful situations" (adapted by T. A. Kryukova);
3. Method of psychological diagnostics of viability of an adult by A.V. Makhnach;
4. Technique SAN.

In the mathematical processing of data the program SPSS-17 was used. The used a discreptive analysis mean sample values of quantitative features are given in the text as  $M \pm m$ , where M is the mean sample, m is the standard error of the mean.

### B. Results of the study

The method of "Forecast Profile" is intended to identify individuals with signs of neuro-psyche instability. Neuro-psyche instability is a tendency to the nervous breakdown during significant mental and physical stress. The activity of fire-rescuers is closely related to long-term psycho-emotional stress, which imposes certain requirements for its stability. The study found that the majority of respondents have a high level of neuropsychic stability. The average score for the group is 8.21 points, which corresponds to a high standart ten of 10. Based on the results of the study, it can be concluded that for a group of subjects, neuropsychic breakdowns are highly unlikely; they are ready for the work requiring increased neuropsychological stability.

Coping strategies are what a person makes to cope with stress. The concept combines cognitive, emotional and behavioural strategies used to cope with the demands of everyday life. The method of "Coping behavior in stressful situations" (adapted by T. A. Kryukova) includes a list of specified reactions to stressful situations and is aimed at determining the dominant coping - stressful behavioral strategies. The questionnaire provides possible human reactions to various difficult, frustrating or stressful situations. It is necessary to indicate how often the respondent behaves in this way in a difficult stressful

situation. The study aimed at determining the dominant behavioral coping strategies of firefighters in stressful situations revealed the following (see table.1)..

The dominant coping strategy for fire-rescuers is one focused on problems solution (53,5). The strategy involves the maximum use of human capabilities to solve the problem. In the second place in the frequency of application is the strategy of avoidance (48.3). This strategy involves various forms of avoidance of contacts with the environment with the aim to escape from problems. The emotional coping mechanism less often used in a stressful situation by firefighters-rescuers (28,1). This coping is expressed by the output or suppression of emotions, a state of hopelessness, self-blame, aggressiveness.

Table 1. Results of descriptive analysis of coping strategies block of behavior in stressful situations of fire-rescuers

Coping strategies	Results			
	Minimum	Maximum	Average	STD. slope.
Problem solving	34,0	65,0	53,5	7,0
Emotions	15,0	46,0	28,1	8,4
Avoidance	31,0	67,0	48,3	8,6

Thus, rescuers in difficult situations are guided, first of all, by common sense, not emotions, and are capable of constructive solution of the problem.

Vitality is the ability of a person to exist and develop, to be adapted to life in general and to unfavourable living conditions, in particular [5]. The method of psychological diagnostics of adult viability by A.V. Makhnach includes six scales corresponding to the main components of viability, such as self-efficacy, perseverance, locus of control, coping and adaptation, spirituality, family and social relationships. The maximum value on each scale is 80 points. The study allowed us to analyze the six main components of the viability of firefighters-rescuers (see table.2).

Table 2. The results of descriptive analysis of the components of the viability of fire-rescue

Variable	Results			
	Minimum	Maximum	Average	STD. slope.
Efficacy	39,0	80	66,2	9,9
Persistence	39,0	77,0	64,9	8,3
Internal locus of control	45,0	77,0	64,3	7,1
Coping and adaptation	49,0	80,0	65,1	7,9
Spirituality	28,0	62,0	42,0	9,8
Family and social relationships	55	80	73,4	6,2

In the study, the highest results were obtained for the component of the external environment, namely family and social relationships (73.4). This means that for firefighters it is very important how they develop interpersonal relationships both in the family and in the professional sphere. This is the most important source of emotional support for them. The work of firefighters is a collective work, which is based on such personality traits as sociability, empathy, willingness to help.

Also, firefighters have high results on the following four scales: self-efficacy (66.2), perseverance (64.9), internal

locus of control (64.3), coping and adaptation (65.1). Such results characterize firefighters as people with adequate self-esteem, faith in their strength and ability to influence the course of life in the future and their environment, persistent and continual in achieving the goal, responsible for their decisions and actions, confident in their ability to cope with adverse circumstances. The results on the scale of spirituality are below the others (42,0). This may indicate that the surveyed rarely think about the existential meaning of life, they are realistic and practical, emotionally stable, focused on the present.

The method of SAN allows to determine the features of the psycho-emotional state of the surveyed by three components of the functional psycho-emotional state - health, activity and mood. The results obtained on each scale range from 1 to 7. The number of points allows you to identify the functional state of the surveyed at a given time. A score above 5 indicates a favourable state of health of the surveyed.

Table 3. Results of descriptive analysis of components of functional psycho-emotional state of fire-rescuers

Variable	Results			
	Minimum	Maximum	Average	STD. slope.
Health	4,3	7,0	6,2	0,8
Activity	3,2	6,9	5,5	0,8
Mood	4,0	7,0	6,1	0,7

According to the results of the study, firefighters showed good results on all three scales: health, activity and mood. (see table.3).

Therefore, it can be concluded that the condition of firefighters at the time of the survey can be assessed as favourable, they feel good, they are active enough and do not have complaints of physical fatigue, and their mood is elated.

### III. CONCLUSIONS

The problem of viability and professional health of specialists for a long time to become the subject of study and increased attention from science. This issue has become particularly acute in relation to the study of professional activities of specialists of extreme profile, and, in particular, rescuers of the Ministry of emergency situations. After all, often, it is the ability of rescuers to remain calm in any situation, from his endurance and resilience, from the ability to quickly adapt to dramatically changed conditions, the life of another person may depend.

Our study shows that the level of development of viability, as well as the state of professional health of rescuers of the Ministry of emergency situations is at a high level. They are sufficiently adapted to the ever-changing conditions of the environment, are able to find a constructive solution to emerging professional problems and problems.

To a greater extent, this is due to the regular psychological work with personnel aimed at correcting and preventing the negative manifestations of the professional activities of rescue workers.

At the same time, the prospect of further research of features of professional health and viability of rescuers of the Ministry of emergency situations in interrelation with their professionally important qualities and efficiency of activity opens.

#### REFERENCES

- [1] E.A. Rylskaya. Viability of human psychology, Chelyabinsk ChGPU, 2009. 361 s.
- [2] A.I. Laktionova, Relationship vitality and social adaptation of adolescents, PhD thesis abstract, Moscow. 2010,
- [3] A.V. Makhnach. Human vitality as a subject of study in psychological science // Psychological journal. 2017. vol. 38. № 4. pp.5–16.
- [4] L.A. Stanovova. Professional viability of the individual in the organizational context// Psychology of work and management as a resource for the development of society in the context of global changes: Materials of the International scientific and practical conference dedicated to the 25th anniversary of the faculty of psychology of Tver state University. – Tver, 2018. pp. 152-157
- [5] A.V. Makhnach. Viability of the person and family: socio-psychological paradigm. M.: Publishing house of the Institute of Psychology of the Russian Academy of Sciences, 2016. 459 pp.