

Features of stress resistant personality of dispatchers, air traffic controllers and registration agents in the airport system

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Abstract — The modern, fast-changing world affects the performance, livelihoods and well-being of man. In the conditions of information, rapid technological changes and digitization in various spheres of life, certain professional attributes are required. There is a need for a professional who is able to make correct and strategic decisions in a multitasking situation, find ways out of crises, assist those who find themselves in a difficult situation and also has a resistance to stress and finds the best way out of crisis. Occupations involving risk and coping with stress include "air traffic controller" - specialists who control and ensure the safe and orderly movement of airplanes on the ground and in the air. The work of check-in agents in the airport system is less associated with risks, however, people in this profession have to resolve contentious, conflict situations and ensure the safety of flight preparations. Thus, the purpose of this investigation is to study the features manifested in stress resistant personalities and preferences in the choice of coping strategies by airport employees (air traffic controllers and registration agents). The study was conducted at the airport base "Domodedovo" (Moscow). The sample size is 78 respondents, of which: 38 are dispatchers, 40 are registration agents. In the course of the empirical research, the following psycho diagnostic tools were used: "Resistance to stress" (F.T. Gottwald); "Perceptual assessment of stress resistance type" (POTS); "Express diagnostics of propensity for unmotivated anxiety V.V. Boiko"; "Coping behavior in stressful situations" (adapted by TA Kryukova)". The methods of mathematical statistics were also used: correlation (Spearman), factorial, comparative (U - Mann - Whitney test) analyzes. The results indicates that the average level of stress resistance of the respondents in both groups. However, air traffic controllers are distinguished by the ability to quickly and clearly formulate goals and find the best ways to achieve them. Representatives of this group are distinguished by their willingness to solve problems themselves and choose a way out of a difficult situation, to be in working mode for a long time and efficiently using temporary resources. Registration agents are more prone to unmotivated anxiety, but at the same time, they are capable of solving problems under time pressure. Respondents in this group more often use coping strategies related to emotions and avoidance. In the fast pace of the modern world, the level of exposure to various stresses is constantly growing. In connection with this, the study of psychological stress is becoming increasingly scientific and practical. Almost every person experienced severe stressful situations in their life. In our time, the social value of a person is put in first place; health is an important condition for life. One of the criteria for a socially valuable and healthy person is their working

capacity, which depends on mental resistance to stressful situations. A high level of stress resistance contributes to the preservation and strengthening of health, as well as a high level of professionalism from the individual.

Keywords— *stress, trait anxiety of personality, coping strategies, stress resistance, decision making.*

I. INTRODUCTION

Today, in the dynamically changing world a person is exposed to stress factors. Socio-political and economic reforms in the country lead to the emergence of certain difficulties for the individual, create new conditions conducive to the activation of the process of its adaptation. The problem of security is also very acute in the modern world. The fight against physical, mental, informational threats is conducted by the governments of many countries systematically and thoroughly. The Internet space is also not "cloudless" for humans, especially for the younger generation, which is most susceptible to various types of influence and infection. All this leads to stressful situations, overcoming of which becomes a pressing problem for the individual.

Careful attention is paid to the professions associated with risk and increased neuro-psychological stress. These specialties are undoubtedly air traffic controllers (specialists who control and ensure the safe and orderly movement of aircraft on the ground and in the air). In the article we will carry out a comparative analysis of the stress resistance of the personality of the specialists in dispatching services and check-in agents, and, although the specifics of the latter's work are less associated with risks, but the safety control of flight preparation is an important task of their professional activities.

II. THE DEGREE OF THE PROBLEM

In recent decades, studying of stress has received much attention in various branches of science: psychology, sociology, biology, medicine. Due to the diversity and complexity of stress forms, there are many approaches to the

study of this condition. To better understand what stress is, you need to refer to the original concept that Hans Selye proposed. This concept was revolutionary for the science of the mid-20th century. [7] He decided to look for consistent patterns of biological reactions and discovered a single, non-specific component of biochemical changes in the human and animal body and in response to a variety of effects.

Selye H. proved that the bark of the adrenal glands in all these cases allocate the same "anti-mustling" hormones. These hormones help the body adapt to any stressor. This phenomenon of the non-specific reactions of the organism in response to a variety of damaging effects was called adaptal syndrome, or stress.

Continuing to develop the doctrine about stress R. Lazarus distinct the mental and physiological stress. With mental stress, a person gives an assessment of a situation as threatening on the basis of personal experience and knowledge, while physiological stress is associated with a real irritant.

The psychologist Irwin Janeis considers stress as a combination of the two senses - "stressful situation" and "stressful reaction". [1]

Spielberger C. D. calls the stress of the propagation or the value of objective danger, which is associated with the properties of the stimulus in this situation. The term "stress" as Speliberger says must be used only to indicate the environmental conditions characterized by a certain degree of psychological or physical danger. He recognizes that such definition of stress is more limited, but at the same time it is more accurate. [8].

Vasiliuk F.E. [4] proposed to abandon the expansion of the stress definition, preserving its primary content - the idea of the nonspecificity of stress. To solve the task, it is necessary to explicate those conceived psychological conditions under which this idea precisely reflects the section of the psychological reality. The idea is to detect the minimum necessary and specific conditions for generating the nonspecific formation - stress. He says that any requirement of the environment can cause an extreme, critical situation only for someone who does not have the ability to cope with any requirements in general and at the same time whose internal necessity of life is an urgent (here and now) meet the need.

Sokolova E. D., Berezina F.V., Barlas T. V. indicate the value of the study of individually significant events as a sensitivity factor in stressors. Neurotic disorders that arise in a mature person under the influence of the diversity of vital events, are characteristic of people who had child stress associated with inadequate behavior of their parents, as well as the factors of the instability of the family. . As a result, the subject forms inadequate models of behavior, the basic security is violated, the identification is difficult. All these lead to difficult to overcome stress situations. [2].

In modern literature, the term "stress" occurs as denoting the following concepts (L. A. Kitaev-Smyk). [5]:

- a strong, negative impact on the body;
- various kinds of strong both positive and negative reactions for the body;
- nonspecific traits of psychological and physiological reactions of the body with strong,

extreme effects for it, which cause intense manifestations of adaptive activity;

- nonspecific traits of psychological and physiological reactions of the body that occur during various reactions of the body.

Turning to the professions associated with risks, it should be noted that the era of informatization and digitalization requires from the individual greater stress resistance, self-reliance and readiness in the conditions of increased psychological stress to effectively perform the tasks.

Computerized control systems impose high cognitive requirements on the user, the implementation of which often leads to mental and physiological tension, disruption of work and behavioral activity. The impact of mental load on the occurrence of occupational stress for an operator depends on a number of specific characteristics of the content of the work task and the conditions for its implementation. The development of occupational stress occurs under the influence of various extreme factors of the workload, with the information overload of the operator and the lack of time to perform a specific task.

Various kinds of danger or threat of physical harm are the main factors for the development of occupational stress in extreme conditions of activity. The impact of a hazard or danger factor during the execution of a cognitive task leads to a breach of accuracy, a decrease in the speed of updating information, a rush to carry it out, and many other negative mental changes.

The main reason for the stress reaction in such a situation is that the individual loses control over his behavior and state. When people believe that they are in control, they feel less stressed and feel much better. [3]

It should also be noted the sense of insecurity as a factor contributing to the development of occupational stress. Uncertainty manifests itself in situations when an action or reaction is required from an employee, but he does not have confidence in achieving certain goals or results of a specific action.

Another factor in the development of occupational stress for the operator is the importance of the result of the work. In the case when the significance of the result from the actions has a high level, stronger reactions are possible, including stressful ones. When an employee is not sure which way of doing the job will allow him to achieve the expected result, this causes significant consequences. Stress becomes stronger in the case when the individual lacks confidence and the consequences are of great importance to him. The duration of exposure affects the onset and increase of stress. When experiencing uncertainty during a longer time has a greater stressful effect or greater tension than the uncertainty experienced by an individual during a shorter period of time. [6]

The operator's stress resistance is one of the most important characters ensuring efficiency, reliability and success of operations.

III. BASE AND RESEARCH METHODS

The research was conducted on the basis of the Domodedovo airport (Moscow). The sample size is 78 respondents, of which: 38 are dispatchers, 40 are registration agents. In the course of empirical research, the following psycho diagnostic tools were used: "Resistance to stress" (F.T. Gottwald); "Perceptual assessment of stress resistance type " (POTS); "Express diagnostics of propensity for unmotivated anxiety (V.V. Boyko)"; "Coping behavior in stressful situations" (adapted by T. A. Kryukova) ". The methods of mathematical statistics were also used: correlation (Spearman), factorial, comparative (U - Mann – Whitney test) analyzes.

IV. THE ANALYSIS OF THE RESEARCH RESULTS

In the course of the empirical study, the following results were obtained. Correlations in the sample of air traffic controllers are presented in Table 1.

Table 1. Correlation analysis of data obtained on a sample of the air traffic controllers.

Scales	Coping emotions	Subscale of distraction	Subscale of social distraction
Perceptual assessment of stress resistance type	R = -0,395, p = 0,05		
Coping avoidance		R = 0,788, p = 0,01	R = 0,373, p = 0,05

The air traffic controllers are able to clearly define the goals of their activities, are distinguished by their willingness to overcome difficulties and make decisions in the face of uncertainty. Therefore, in their sample, an inverse correlation with the "emotion" coping is traced, since the work of dispatchers suggests restraint in expressing emotions. At the same time, they are characterized by immersion in their own thoughts and life plans, and also "avoidance" is accompanied by an expansion of social interactions (new acquaintances, communication with friends, etc.)

With registration agents, there is a strong relationship between coping directed to avoiding and the Subscale distraction (Table 2).

Table 2. Correlation analysis of data obtained on a sample of the registration agents.

Scales	Subscale distraction
Coping avoidance	r = 0,772, p = 0,01

The professions related to the "person-to-person" system are distinguished by increased responsibility for the nature of the subject-to-subject interaction, willingness to resolve conflict situations, the ability to assist and support passengers, thereby ensuring pre-flight safety and creating comfortable conditions for customers. In this regard, coping "avoidance" is directly related to the desire of the individual to surround himself with people who share his interests, or immerse himself in his thoughts, fantasies and plans.

The results of factor analysis should also be presented. When analyzing the data obtained on a sample of air traffic controllers, four factors were identified:

Factor 1.

- avoidance coping (0.899)
- subscale distraction (0.868)

Factor 2.

- anxiety (-0,878)
- coping aimed at solving (0.898)

Factor 3.

- resistance to stress (-0.759)
- subscale of social distraction (0.824)

Factor 4.

- perceptual assessment of stress resistance (-0.791)
- coping aimed at emotions (0.832).

The first factor "Avoidance of stress": the dispatcher, using the coping avoidance to relieve stress symptoms, chooses the methods and techniques described in the distraction subscale (watching TV, sleeping, etc.).

The second factor is "Reducing anxiety level": the dispatcher uses productive strategies to solve emerging problems, thereby overcoming nervous tension and anxiety.

The third factor is "Reducing the level of stress resistance": the frequent use of social distraction techniques has negative consequences in the form of poorly developed resistance to stress.

The fourth factor "Evaluation of stress resistance": the more often dispatchers use coping, which stimulates the expression of emotions, the lower their perceptual evaluation of stress resistance.

The three-factor structure was identified on a sample of airport registration agents:

Factor 1.

- avoidance coping (0.906)
- subscale distraction (0.895)

Factor 2.

- anxiety (0,680)
- subscale of social distraction (0.848)

Factor 3.

- resistance to stress (0.775)
- emotion coping (0,646)

The first factor, "Stress avoidance": the registration agent, when using coping to avoid stress symptoms, prefers using the methods and techniques described in the distraction subscale (watching TV, sleeping, etc.).

The second factor, "Increasing anxiety level": anxiety level among registration agents increases if the desire for social distraction increases.

The third factor, "Improving stress resistance": the use of coping, which generates experiences associated with various life situations, leads to an increase in the stress resistance of airport registration agents.

To identify the differences between the indicators obtained during the study of two samples, a comparative analysis (U - Mann-Whitney test) was used:

1. The group of air traffic controllers ($C_p = 41.73$) differs from the group of registration agents ($C_p = 19.27$) by using coping aimed at solving problems $U = 113$, $p = 0.005$.

2. The group of air traffic controllers ($C_p = 24.70$) differs from the group of registration agents ($C_p = 36.30$) by using coping directed at emotions $U = 276$, $p = 0, 009$.

3. The group of air traffic controllers ($C_p = 24.83$) differs from the group of registration agents ($C_p = 36.17$) by using the methods described in the distraction subscale $U = 280$, $p = 0.011$.

V. RESULTS AND DISCUSSION

In view of the specifics of their work, all air traffic controllers are trained in stressful situations to instantly make a decision that is correct and conducive to the preservation of human lives. They cannot be addicted to emotions. In any situation, they try to be calm and concentrated and search for the optimal solution. Registration agents are also task

oriented. However, due to the specifics of the activity (a large number of passengers with their problems, emotional states, manifestations of aggression, conflict, etc.), they, as well as due to their limited work experience, cannot always control their emotional states.

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