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MPHTI STUDY OF PSYCHOLOGICAL DIFFERENCES OF STRESS-RESISTANT TYPES IN ATHLETES

Abstract.

The problem of the occurrence of stress in a person, its course and consequences attracts the attention of specialists in various fields of Science, from doctors to sociologists and psychologists. In recent years, on the applied aspects of Stress Research, the number of publications covering various aspects of human life has increased significantly. At the same time, not only conceptual, but even terminological unity has not yet been achieved. This led to an expansion of the conceptual apparatus, when the term “stress” began to be understood as a very wide range of phenomena, which is especially evident in the example of psychological stress. Many authors believe that the interpretation of stress is so diverse that it significantly complicates the development and adoption of measures to prevent and overcome excessive stress in practice. In addition, it causes terminological confusion among therapists, physiologists, and psychologists, complicating the interdisciplinary integration of medical, biological, and psychological sciences in human research.

Keywords: *stress, athletes, typological differences, endurance, stress factors.*

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ИЗУЧЕНИЕ ПСИХОЛОГИЧЕСКИХ РАЗЛИЧИЙ СТРЕССОУСТОЙЧИВЫХ ТИПОВ У СПОРТСМЕНОВ

Аннотация.

Проблема возникновения стресса у человека, его течения и последствий привлекает внимание специалистов из разных областей науки, от врачей до социологов и психологов. В последние годы значительно увеличилось количество публикаций по прикладным аспектам исследования стресса, затрагивающих различные аспекты жизни человека. Кроме того, еще не достигнуто не только концептуальное, но даже терминологическое единство. Это привело к расширению понятийного аппарата, когда термин «стресс» стал пониматься как очень широкий круг явлений, что особенно ярко проявляется на примере психологического стресса. Многие авторы считают, что интерпретация стресса настолько разнообразна, что существенно затрудняет разработку и принятие мер по предупреждению и преодолению чрезмерного стресса на практике. Кроме того, это создает терминологическую путаницу среди терапевтов, физиологов и психологов, затрудняя междисциплинарную интеграцию медицинских, биологических и психологических наук в человеческие исследования.

Ключевые слова: *стресс, спортсмены, типологические различия, выносливость, стрессовые факторы.*

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СПОРТШЫЛАРДАҒЫ СТРЕССКЕ ТӨЗІМДІЛІКТІҢ ПСИХОЛОГИЯЛЫҚ АЙЫРМАШЫЛЫҚТАРЫН ЗЕРТТЕУ

Аңдатпа

Адамда стресстің пайда болуы, оның барысы мен салдары мәселесі дәрігерлерден бастап әлеуметтанушылар мен психологтарға дейін ғылымның әртүрлі салаларындағы мамандардың назарын аударады. Соңғы жылдары адам өмірінің әртүрлі аспектілеріне әсер ететін стрессті зерттеудің қолданбалы аспектілері бойынша жарияланымдар саны едәуір өсті. Бірақ, концептуалды ғана емес, тіпті терминологиялық бірлікке де қол жеткізілген жоқ. Бұл «стресс» термині құбылыстардың өте кең шеңбері ретінде түсіндіріле бастағанда, концептуалды аппараттың кеңеюіне әкелді, әсіресе психологиялық стресстің мысалында айқын көрінеді. Көптеген авторлар стресстің шамадан тыс алдын-алу және жеңу шараларын әзірлеуді және қабылдауды қиындататын түсіндірмесі соншалықты әр түрлі деп санайды. Сонымен қатар, бұл терапевттер, физиологтар мен психологтар арасында терминологиялық шатасуды тудырады, медициналық, биологиялық және психологиялық ғылымдардың адам зерттеулеріне пәнаралық интеграциясын қиындатады.

Кілт сөздер: *стресс, спортшылар, типологиялық айырмашылықтар, төзімділік, стресс факторлары.*

Relevance of the study.

The vital activity of a person in the socio-economic conditions of modern society is inextricably linked with the intense influence on him of unfavorable environmental, political, social, professional and other factors that require updating the internal resources of the individual in order to adapt to emotional-oppressive or stressful situations. In this regard, the problem of mental stability and successful adaptation of a person to various life difficulties is becoming relevant.

"Stress" does not look at the border, it is International and is present in all states, civilizations and cultures even in the most developed and poor countries. According to American sociologists, about 20% of the costs associated with staff turnover, absenteeism, resistance to organizational changes, and reduced productivity are caused by professional neuroses and stress. American economists estimate the National damage caused by stress factors at жыл 500 million annually. And in the CIS countries, according to sociological studies, every third employee experiences severe stress at least once a week, and 13% of employees experience almost daily stress.

The interest of researchers in problems related to stress and the mechanisms of formation of a person's resistance to stress in the context of professional activity has always been and remains relevant for Psychological Science. A significant part of the research on stress resistance is related to the professional activities of operators in various fields.

State of study of the problem.

In general psychology, the problem of stress tolerance is presented within the framework of the theory of personality (G.Allport, H.Eysench, B.Cottell, C.Roders) "achievements of motivational theory" D.Mc Clelland's theory of homeostasis (W. Kennon) and stress G. Sele the essence of the adaptive theory of the sympathetic nervous system was studied by L. A. Orbeli, the theory of the structure of the nervous system and temperament by I. P. Pavlov, V. D. Nebylitsin, V. S. Merlin) the theory of reliability of actions by B. F. Lomov, the professional concept of self-consciousness by L. M. Mitina. This influenced the transition to the study of different types of actions through specific phenomena (B. L. Vyatkin, P. B. Silberman, E. G. Ilyin, G. S. Nikiforov, M. F. Seka, V. L. Marishchuk).

On July 4, 1936, the English journal Nature published a letter by G. Sele to the editorial office "syndrome caused by various damaging agents", which contained data on the standard reaction of the body to the action of various disease-causing agents. This, being a central concept in the

scientific theory of stress, laid the foundation for the direction of Stress Research[1], although in the scientific works of W. Wundt, W. James there are reflections on the problem of stress.

And the physiological aspects of stress were first mentioned in 1914 by W. Cannon. He foresaw Sele's views on the problem of psychophysiological response by describing one of the specific aspects of the stress response—the neuroendocrine process. In some works of Russian scientists (A. D. Speransky, D. N. Nasonova, M. Ya. Alexandrova and others), the period of stress, as well as the correct directions in revealing the mechanisms of subsequent and non-specific adaptation, are identified[2, 7B.].

In the future, the doctrine of stress became widely known, and research began to be conducted systematically. G. Sele and his followers drew attention to the biological and physiological aspects of the problem of stress. It has become traditional to understand stress as a physiological reaction of the body, in particular the pituitary gland, the reaction of controlled endocrine glands to the influence of various negative factors. The role of nervous and endocrine components in stress regulation has been established, i.e. the physiological mechanism of stress is formulated.

In 1952, B. Goldstone proposed the development of Celle's theory. It complements the laboratory experiments of G. Sele with a description of typical clinical conditions. B. Goldstone says that it is very useful to describe adaptation in this way with the help of adaptive energy. At the same time, he refutes the first axiom, according to which there is a limited amount of adaptive energy transferred from birth.

According to the conclusions of many researchers (L. M. Abolin 1987, G. F. Zeramba 1982, L. M. Mitina 1992, S. V. Subbotin 1992), the types of social activities in which professional activities are aggravated and the types of professions that are prone to stress include teachers, athletes, doctors, managers, etc. The growth of stressogens in the activities of owners of this profession is of particular importance in determining stress resistance (Markovaa.K, Mitina L. M, Shcherbakov A. I) growth of competition, development of new strategies in society, demands in society for the education of the younger generation.

As a state of mental tension that indicates stress, there are visible disintegrations in behavior and neuromuscular disorders in actions (Dyachenko M. N. I. Dr. 1985, Naenko N. I. 1976), such situations are the occurrence of information overload, in which a person is not able to solve tasks, the result of decisions made requires a high level of responsibility, does not have time to make the right decision (Bodrov V. A. 1997, 2000, Bodrov V. A., Oboznov A. A., Turzin P. S. 1998), S. S. Chshmarityan (1990) designed and group the emotional state, determined the dependence of psychological directions on the essence of stress. It is divided into areas such as behaviorist, interactionist, transactionist, psychoanalytic, and Marxist. Everyone interprets the phenomenon of stress from different angles. Stress, focused on the main psychological thought, has a different effect on a person's behavior. The improvement of activity increases the degree of disorganization predisposition and reduces the adaptation of a person to the environment (Anokhin P. K. 1975, Lomov B. F. 1984, Sudakov K. V. 1975).

According to L. Levy [3], emotional stress can be considered part of the continuum of emotional states, in which the transition of physiological homeostasis to the highest in the case of anger is the lowest in the case of complete indifference, and positive and negative emotional states are accompanied by a change in the level of physiological homeostasis. Therefore, stress is a special psychological state associated with emotions, but it is not copied only by emotional phenomena, it is determined and reflected by cognitive, volitional–motivational, behavioral and other personality components. Stress is a phenomenon of how many reactions a physical structure has to a situation, so much so that it is a feature of the relationship between the individual and the environment (Lazarus R.S. [4]). It is the highest level of productivity of our intellectual processes, the reflection in the mind, the assessment of situations, the knowledge of one's own resources, the level of assimilation of management methods, behavioral strategies, the stress conditions that arise in one person through thought do not manifest in others.

A theoretical analysis of the literature on this topic shows that only a few determinants, manifestations and consequences of individual stress tolerance have been the subject of many

studies. There is practically no comprehensive study of stress resistance as a holistic property based on the interaction of many levels of regulation and the determination of resistance to adverse conditions. In this regard, it is important to prepare an adequate diagnostic tool that allows you to diagnose this psychological phenomenon efficiently and in a timely manner.

Theoretical significance of the research work:

The paper presents a theoretical and empirical justification of a new scientific direction in psychology - the formation of psychological resistance of professional athletes to stress factors, which includes the subject of research, the structure and system of concepts, its own boundaries and directions of research, methodological foundations and means of methodological research. It is considered and analyzed from the point of view of combining the achievements of Psychological Science on the problem of stress and various foreign approaches to the study of psychological stress and its consequences. The work was carried out within the framework of a special program for the formation of psychological resistance to stress factors, in combination with an empirical study of psychological resistance of professional athletes to stress factors.

Practical significance of the research work:

The results obtained in this paper allow us to use them in the formation of psychological resistance of professional athletes to stress factors. The results of the research are of interest for psychological, pedagogical, psychotherapeutic practice and social work and are widely used in the creation of training courses and workshops for students of psychological-practical and Clinical-Psychological specialties. The data obtained in this study are important for the development of individual psychological rehabilitation programs for various contingents exposed to high-intensity stress factors, the development of post-stress States in order to identify the risk group in time and determine psychotherapeutic strategies for working with them. A developed complex of Clinical, Psychological and psychodiagnostic methods is important for researchers, which allows them to be included in a set of mental diagnostic tools to work with people who have experienced traumatic stress.

The reliability and validity of the research results is ensured by the consistent implementation of methodological principles, theoretical and methodological processing of the problem; the use of complementary research methods; a meaningful comparative analysis of the phenomenology of phenomena and connections identified in a large representative sample ($n = 375$ in the adaptation of methods and $n = 117$ in the empirical study). The accuracy of the data depends on the compliance of the criteria, careful statistical processing of the material; revision of individual questionable results; the correlation of quantitative and qualitative data is justified by the repetition of a number of results obtained by foreign and domestic researchers.

Research forecast: when the causes of the development of stressful situations in the life of athletes are scientifically and theoretically analyzed, a special program for the formation of psychological resistance to stress factors and its content are systematized and research models are identified, there are opportunities to increase their stress resistance.

Research progress

The problem of psychological resistance to stress is one of the most actively studied, caused by the increasingly complex living conditions of people in the modern world [5-13]. Examples of this are growing social tensions and conflicts, excessive information overload, and economic shocks.

The topic of psychological stability is of particular importance in the field of sports achievements, where stress resistance is one of the necessary qualities of a person. Stress factors in the professional activity of athletes create high demands on their adaptive resources. The lack of these resources leads to poor productivity, impaired social adaptation, and the development of stress-dependent diseases.

The professional activity of athletes has a clear socio-psychological and emotional background, which determines the effectiveness of sports activities. Athletes experience constant emotional overload in their actions (during training and performing). Mental tension, the need for constant

physical and emotional training place special demands on the psychophysiological component of the athlete's body.

Constant stress, high anxiety contribute to emotional burnout, professional deformities, and improper regulation. All this affects psychological and mental health, professional effectiveness, and requires the study of the problem of psychological resistance to their stress factors.

Productive works, trends, properties, and patterns aimed at smporters with low stress resistance to solve Research tasks are only within a certain type. The use of typologization procedures is based on Cluster analysis, not general analysis.

In primary statistical processing, the k-means method was performed for clustering athletes. As a result, 4 clusters with a low level of stress resistance in sports activities were identified. The main statistical characteristics obtained from the types of athletes are compared with the psychological characteristics. It is shown in Table 1-3 in Figure 1.

Table-1. arithmetic mean indicators of psychological characteristics of a cluster of athletes with low stress resistance

Indiators				
	Type 1	Type 2	Type 3	Type 4
1	2	3	4	5
1. Work experience in sports	8	23	26	12
Age	30	43	45	39
3. Strength of the nervous system	2,9	3	3,8	3,9
4. Energy	4,5	5	5	5
5.Social energy	9	10	10	10
6. Flexibility	5	6	6	6
7. Scial flexibility	6	6	6	6
8. Pace	7	7	7	7
9. Social pace	8,2	9	9	9
10. Emotionality	6,9	6	6	6
11.Social Emotionality	7,8	7,5	7,5	7,5
12. Satisfaction	35	42	32	39
13. Total internalization	25	27,8	26,5	27,5
14. Internships by achievements	7,3	8,8	8	7,7
15. Failures of internality	6,3	5,8	6,5	7,2
16. Neuroticism	7,4	6,2	10	5
17 Spontaneous aggressiveness	4,1	2,2	2	2
18. Depression	7,4	5,6	7	5
19. Anger	5,4	4,4	3	4
20. Majority	8,2	8,4	6	7,7
21.Balance	3,8	3	4,5	4,2
22.Реактивті агресивтілік	3,9	3	3	4,2
23.Shyness	5,6	2,6	7	4
24. Transparency	10,2	7,4	8	9,7
25. Extroversion	6,6	5,2	3,5	4,7
26. Emotional stability	7,7	6,6	8	5
27. Masculinity-femininity	6,4	6,6	5,5	7
28. Self-assessment of professionalism	6,3	8,6	8,5	7,2
29. Intellectual development	88,2	98	72	79,5
30.EA of learners' psychological condition	6,3	7,6	7,4	3,8
31. assessment of teaching methods	6,3	8,3	8,6	4,3
32. Assessmet of communicative skills	6,8	6,4	8,4	4,7
33. assessment of organizational skills	6,8	8,8	8,9	3,8

34. Assessment of self-control	6,7	9,0	8,9	3,9
35. Assessment professional skills	6,4	8,2	8,4	4,3
36. Internal motivation	40,1	42	42,5	37,5
37. External positive motivation	31,8	39,4	33,5	30,7
38. External negative motivation	40,6	35	17,5	31,2
39. The ratio of motvaion	3,24	4	5,5	3,5

Table-2. distribution of stress-sensitive type psychological differences in athletes by T-student

Distinguishing features and differences between types						
Керсеткіштер	Тип 1 Тип 2	Тип1 Тип 3	Тип 1 Тип 4	Тип 2 Тип 3	Тип 2 Тип 4	Тип 3 Тип 4
1	2	3	4	5	6	7
1. Work experience in sports	-12	-14	-3,2	-	5	5
Age	-8,7	-7,6	-4,9	-	-	-
3. Strength of the nervous system	-2,9	-11,4	-7,1	-4,4	-4,1	-
4. Energy	-	-	-	-	-	-
5. Social energy	-2,6	-	-2,3	-	-	-
6. Flexibility	-2,2	-	-	-	-	-
7. Scial flexibility	-	-	-	-	-	-
8. Pace	-	-	-	-	-	-
9. Social pace	-2,9	-	2,7	-	-	-
10. Emotionality	2,6	-	2,4	-	-	-
11. Social Emotionality	-	-	-	-	-	-
12. Satisfaction	-2,9	-	-	2,7	-	-2,2
13. Total internalization	-2,6	-	-2,0	-	-	-
14. Internships by achievements	-4,7	-	-	3,2	2,7	-
15. Failures of internality	-	-	2,8	-	-3,6	-
16. Neuroticism	2,1	-2,3	3,1	-4,5	2,1	4
17 Spontaneous aggressiveness	4,4	3,3	4,6	-	-	-
18. Depression	4,2	-	4,5	-2,6	-	3,6
19. Anger	2,0	3,2	2,4	4,6	-	-2,1
20. Majority	-	3,5	-	3,3	-	-2,1
21. Balance	2,9	-	-	-4,5	-5,3	-
22. Реактивті агрессивтілік	2,7	-	-	-	-3,6	-2,4
23. Shyness	8,8	-3,1	2,8	-11,5	-2,2	3,2
24. Transparency	6,8	4,4	-	-	6,0	-6,3
25. Extroversion	3,8	5,4	4,4	8,2	2,1	-4,3
26. Emotional stability	2,8	-	4,6	-2,5	2,4	3,1
27. Masculinity-femininity	-	-	-	2,1	-	-2,7
28. Self-assessment of professionalism	-6,9	-4,9	-2,9	-	4,9	5,4
29. Intellectual development	-2,8	3,7	2,8	6,3	6,2	-6,8
30. EA of learners' psychological condition	-11,9	-6,2	18,3	-	29	17,1
31. Assessment of teaching methods	-13,7	-12,4	11,5	-	21,7	19,1
32. Assessmet of communicative skills	3,3	-7,3	23,3	-6,3	3,7	13,5
33. assessment of organizational skills	-18,6	15,1	24,6	-	40,5	36,5
34. Assessment of self-control	-21,0	-18,4	26,4	-	37,0	35,1

35. Assessment professional skills	-13,6	13,6	18,9	-	29,1	45,7
36. Internal motivation	-	-	-	-	4,5	3,4
37. External positive motivation	-5,4	-	-	4,3	8,9	3,1
38. External negative motivation	3,0	11,2	6,06	6,8	-	-12
39. The ratio of motvaion	-2,2	-5,9	-4,2	-3,1	-	3,3

Table - 3. recent features and individual indicators of athletes among stress-resistant types

Properties	Type 1	Type 2	Type 3	Type 4
	1. strength of the nervous system	2,6	3	3,8
2. energy	4,5	5	5	5
3. Social energy	9	10	10	10
4. flexibility	5	6	6	6
5. Social flexibility	6	6	6	6
6. pace	7	7	7	7
7. Social pace	8,2	9	9	9
8. emotionality	6,9	6	6	6
9. Social emotionality	7,8	7,5	7,5	7,5
10. age	30	43	45	39

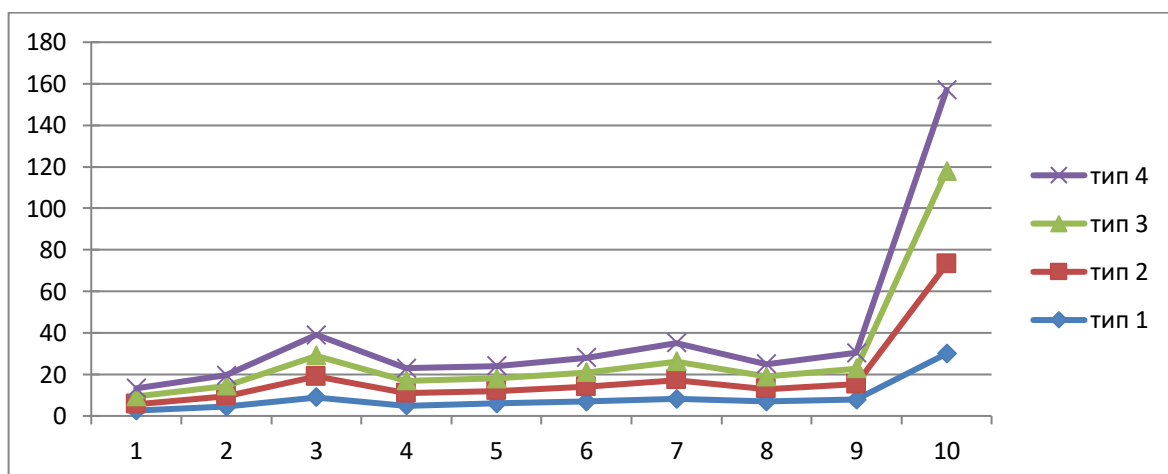


Figure 1. indicators of the appearance of individual qualities in various sports

According to age criteria, type i is allocated. This group of athletes includes young athletes aged 30 years. The average age of athletes of other types is not distributed among themselves according to statistics (type II C-43.4 years, Type III C-44.5 type IV C-39.5 years)

Type i has a strong nervous system. the arithmetic average for the group is 2.6 points. Athletes of Type II have moderate indicators of nervous process-weak C - 3 points, types III and IV are characterized by a sensitive-weak nervous system.

According to the nature of temperament, the following differences are identified:

A) in terms of social flexibility, there is a difference only in types I. C-9 points with low relative indicators of qualities of the composition of athletes type II C - 10 points, Type IV C - 10 points.

B) low flexibility and social pace in athletes of type i - c-5 points, Social intensity-C-8.2 points. in representatives of Type II-C-6 and 9 points) only employees in the field of Education have a social pace.

C) emotionality the psychodynamic system of behavior often manifests itself in types I. C-6.9 points compared to athletes of Type II and IV.

Thus, summing up the results of the research, the following conclusions were drawn::

1. various ways of comprehensively revealing the phenomenological basis of stress resistance of athletes are shown in the research paper.
2. the specifics and intensity of stressful situations are mainly determined by the degree of disagreement between needs.
3. overcoming the distress situation depends on the person's performance of the subject's professional activities
4. attempts to adapt professionally and socially to stressful situations may also be aimed at restoring the structure of the personality.
5. using the typological method, 4 sets of strategies were identified for athletes who productively solve psychosport difficulties. These are: motivational, professional-competence, reflexive, communicative-flexible strategies.
6. based on Typolization, 4 types of stress-free athletes were identified. Everyone has their own weaknesses.
7. comprehensive and special stress relief mechanisms, a unified stress response system have been developed.
8. operational activity personal stress can be strengthened by conducting seminars, business Games, trainings aimed at developing intellectual and teaching skills, and individual consultations to stimulate the resource of independence.

Conclusion

One of the main risk factors for the life, well-being and health of a modern person is stress. Stress has become a typical phenomenon that occurs in the conditions of life created by a person himself. Working capacity is significantly reduced, health deteriorates, the probability of making wrong decisions increases, and conflict situations arise.

Methodological and theoretical basis of the study: individual principle (S. L. Rubinstein), principle of determinism (S. L. Rubinstein), principle of subject (S. L. Rubinstein), system approach.

The theoretical basis of the research was formed: G. Sele theory of stress, R. Lazarus, S. Faulkman cognitive theory of stress, L. A. Kitaeva-Smyk, approaches to professional stress A. B. Leonova, V. A. Bodrova, the concept of combating R. Lazarus, S. Faulkman, S. Carver, J.E. Singer, L. M. Davidson, P. A. Toyts, L. I. Antsiferova, V. A. Bodrova, R. M. Granovskaya, L. I. Dementi, A. N. Demina, T. L. Kryukova, K. Muzdybaev, S. K. Nartovoy-Bochaver, N. M. Nikolskoy and others. Approaches to the study of stressful situations Dikoy L. G., Bodaleva A. A., Vasilyuk F. E., Vinogradova L. V., Kitaeva L. A.-Smyka, Makhnach A.V., Muzdybayeva K. A., T. A. Nemchina, Fomenko G. Yu. et al.

In a particular area of human activity, the relationship between behavioral strategies and behavioral features is revealed, which complements the individual-situational approach to dealing with behavior and expands its capabilities in relation to the behavior of a person in a difficult situation for him. The results of the research are used in personal psychology, organizational psychology and labor psychology, management psychology, in the selection and selection of personnel for senior positions, in predicting the behavior of managers, in the development of stress management programs to increase stress resistance.

Professional stress is associated with the work of an employee, his condition, employee relationships, salary, the problem of self-realization, etc.

There are several types of professional stress - informational, emotional, communicative, professional success stress, fear of professional mistakes, competition stress, success stress, and money-making stress.

Technologies for preventing and overcoming professional stress. These include: creating favorable working conditions to reduce the level of stress factors, mastering methods of stress management - changing the Social, Psychological and organizational environment at the workplace; ensuring greater autonomy of the employee; building a bridge between work and home; and professional development; creating a favorable socio-psychological climate in the

organization; organizing special trainings, teaching employees relaxation techniques, autoregulation, self-programming.

The problem of control and Prevention of stress (stress) at work is not related to the fact that stress "fights" all the way, but rather to competent and responsible stress management and reducing the likelihood of stress developing into stress. From this point of view, the problem of stress at work is close to the problem of conflicts at work, because as you know, such a conflict as stress can be useful and even necessary for the development of the organization and specific employees of this organization. The problem of conflicts in an organization also consists in directing the energy of this conflict in a positive direction for the development of the organization itself and the personality of employees.

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