

THE ISSUE OF STRESS-RESISTANCE DEVELOPMENT AS A CONDITION OF FUTURE PROJECT MANAGERS EFFECTIVE ACTIVITY

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***Abstract:** Under modern conditions stress-factors exert regular influence upon a human being. In this regard it is necessary to say that the very influence of these factors is unavoidable in our life. Thus the diversity of such factors according to their origin, duration, intensity, reactions peculiarity causes a real problem in course of professional development. People constantly striving to progress complicate this diversity and in such a way the study of stress-resistance as a human quality to resist a negative influence of factors and pathological states development is becoming more and more significant.*

***Key words:** project manager, professionally important capacities, stress-resistance, training.*

1. INTRODUCTION

Project managers often find themselves in difficult stressful situations what gives rise to professional burnout, emotional exhaustion and mental stress which interfere with professional duties effective implementation. Therefore we consider stress-resistance as a professionally important capacity of a project management specialist.

The issue of stress and stress resistance for the representatives of different professions has been studied by C. Bernard, H. Selye, R. Lazarus, O. Kononenko, K. Vereschahina-Yatsenko, M. Kaplia, O. Markovets etc. We consider the issue of stress-resistance development as one of important and necessary peculiarities of project manager professional and psychological aptitude as a basis of this sphere specialist personhood achievement.

In its direct meaning stress-resistance is regarded as an individual capacity of an organism to keep its normal working efficiency (K. Sudakov); as an important level of adaptation to environment and professional activity extreme factors (V. Bodrov); as a capacity to social adaptation, important interpersonal relations maintenance, successful personal potential fulfillment provision, life goals achievement, working efficiency and health preservation (H. Nikiforov); as a condition of physical, emotional and mental exhaustion caused by an array of emotional tensions and significant situations (V. Ababkov, M. Perrez).

Personality stress-resistance keeping or development involves the search of resources favoring stress situations negative consequences overcoming. The resources relate to internal and external variables which contribute to resistance maintenance in stressful situations. The peculiar category of stress-resistance resources includes overcoming behavior

strategies and models. The character and methods of stress-situations overcoming depend upon the life stand, personality activity, personal potential and capacities fulfillment necessity (H. Nikiforov, Yu. Aleksandrovskiy, V. Ababkov, M. perrez, Yu. Scherbatykh, O. Chebykin, V. Maryschuk, R. Lazarus).

2. STRESS CONCEPT RELATED TO MANAGERIAL ACTIVITY AND STRESS-RESISTANCE METHODS

The stress concept was introduced into science approximately 70 years ago by the Canadian scientist H. Selye, one of the most prominent physiologists of the 20th century. He mentioned that the very concept of stress bore different meaning for different people; therefore it was quite difficult to find its specific and unambiguous definition. The stress theory of H. Selye is the most popular [1]. According to this theory the mechanism of stress appearance consists in the fact that all biological organisms possess vitally important inborn mechanism of inner equilibrium and balance support. Strong external irritants can shatter this balance and an organism shows a protective and adjustable reaction. This nonspecific for an organism balance violation is considered to be a stress condition. If the irritant doesn't disappear the stress becomes stronger, develops causing an array of peculiar changes and an organism tries to protect itself, prevent stress or suppress it. But the possibilities of every separate organism are not immeasurable and under strong and often stressful influence they become exhausted or sometimes even ill.

H. Selye proved that there were three stages in course of stressful reaction development:

- an anxiety stage, which finds expression in all body resources mobilization;
- a resistance stage on which an organism successfully copes with external factors at the expense of previous mobilization. The highest level of stress-resistance, mental and muscular activity intensification, a will and desire to overcome unusual circumstances or extraordinary situation are typical for this stage. If the stressor effect ceases at this stage or its intensity diminishes, the aroused changes gradually return to normal;
- an exhaustion stage on which durable exhaustion develops if the stressor effect doesn't cease and continues to exert strong and durable influence. The adjustable opportunities of an organism diminish, it offers worse resistance to new harmful factors and as a result the danger of a disease appears.

Over the last years physiological and psychoemotional stresses have been conventionally distinguished [2]. The physiological stress is attributed to a real irritant. Besides microclimate, radiation, noise, vibration, natural disasters may be regarded as stressors. Psychoemotional stress arises from the individual's personal stand. An individual responds to the surrounding factors relying upon external stimuli personal interpretation which depends upon mental qualities, social status, role behavior, age, breeding, life experience. Psychoemotional stress divides into informational stress, which develops as a result of informational overexertion (a person doesn't perform tasks, doesn't have time to take correct decisions in necessary order under high level of responsibility), and emotional stress, which arises under threat, danger, offence, when a person during a long time remains alone with personal feelings.

Among the common characteristics of stress one can distinguish enhanced anxiety, irritation, difficulties with attention concentration, chronic tension combined with inability to relax, difficulties with decisions-taking, decrease of the level of the work being performed

and its performance delay. In addition stress has physiological symptoms such as headache, appetite and sleep violation, and in the worst case scenario psychosomatic deviations. Durable stress aggravates immune system functions and possibilities. It is extremely hard to perform purposeful activity, switch and distribute attention under stressful situations and the threat of activity general suppression or total disorganization emerges. Besides, skills and habits remain without changes [2].

Stress-resistance is identified with emotional stability and ability to control emotions (Ye. Milerian); ability to endure large loadings and successfully solve different problems in extreme situations (N. Danylova); ability to cope with emotional excitement state in course of complicated operation execution (V. Maryschuk); temperament characteristic allowing to fulfill purpose-oriented tasks at the expense of optimal exploitation of neuropsychic emotional energy reserves (V. Plakhtiienko, N. Bludov), positive emotions steadfast prevalence (A. Olshannykova); integrated personal quality which is characterized by the interaction of emotional, volitional, intellectual and motivational components of a human's mental activity which provides activity target optimal successful achievement in a complicated emotive atmosphere (P. Zilberman).

Stress-resistance is developed on the basis of multiple contact of a person with stress-producing factors. This contact manifests itself in a complicated process including stressful situation assessment, activity regulation under stressful conditions, coping with the stress. Today there are a lot of methods aimed at stress-resistance level enhancement. All these methods can be divided into two groups: differential and integrated [3]. The group of differential methods is used in those cases when a person's activity is connected with distinctly expressed physiological or psychoemotional stresses. For such workers stress-resistance enhancement psychological relaxation and physical exercises complexes are applied. Modern kinds of a human activity are influenced by stress-factors which don't have distinctly expressed mechanism of physiological and psychoemotional operation, therefore stress-resistance enhancement integral methods including reflexotherapy and reflex preventive treatment are more wide-spread. These methods presuppose the influence upon human's skin biologically active markings. Furthermore skin is considered as integral informational system. Its parameters undergo dynamic changes under the influence of different stress-factors what is predetermined by the skin close functional connection with all subsystems of a human body. These methods include acupuncture, palpation, warming-up, cauterization, cryotherapy, electropuncture, magnetotherapy, laser therapy. Such methods as relaxation, breath autoregulation, recreation, autogenous training contribute to the stress-resistance level enhancement, positive psychological state preservation and health promotion.

Managers with high emotional stability demonstrate constancy of their interests, assess situation objectively and are able to control the surrounding processes. Low level of emotional stability testifies to possible emotional state balance change under nonstandard conditions, different disorders etc. High personal anxiety is accompanied by neurotic conflict, emotional breakdown and psychological diseases. Low personal anxiety of a manager testifies to the manifestation of self-confidence, carelessness and sometimes redundant audacity which verges upon unreasonableness. Under high reactive anxiety manager's attention and coordination get violated, professional activity is accompanied by subjective emotions, tension, disturbance, nervousness. Low reactive anxiety manifests itself in a striving to show oneself in fine fashion, that's why such category of managers requires mental activity stimulation [2].

Managerial activity provides for the availability of quite manifold spectrum of professional skills and practices what in course of aspiration of their implementation results in a sharp growth of psychological loadings. In answer to their action the body tries to achieve stability at the expense of additional resources involvement. Such method of inner balance achievement generates stress. That is the reason why stress-resistance is considered to be the main psychophysiological professionally important capacity of a manager [4].

Having integrated scientific approaches to stress-resistance determinants, V. Korolchuk draws a conclusion on external and internal psychological factors of a personality stress-resistance. The external factors include stressful situation assessment which embraces objective (external) and subjective (internal) stressful situation parameters; stress-coping strategies (coping-behavior); the influence of traumatic events upon personality and traumatic experience processing level; social support; professional and personal experience; psychological preparation to the activity under extreme conditions. Being a personality integrated characteristic stress-resistance provides for the interaction with all structural characteristics of a psyche both during stress-factors influence and after it. Determinant internal factors of personality stress-resistance formation and development are as follows: personality self-conception, internal locus of control, cognitive development, communicative sphere maturity, personality stress-resistance structural components informative characteristics. Besides, stress-resistance high level provides for emotional balance, self-assuredness, absence of shyness, low level of personal anxiety, volitional self-control, self-possession; certain characteristics of motivational sphere (labor social importance, mastery, achievement motivation), high level of internal locus of control, aptitude for activity. Initial stress-resistance determinant characteristics are as follows: information processing rate, neural processes lability, reliability, fortitude, activity accuracy and productivity. Assertive actions, personality activity in interaction, prosocial behavior, search of social support and social contacts are the leading stress-coping strategies which determine stress-resistance [5]. So personality stress-resistance has a multilevel determination and is predetermined both by environmental and personality characteristics.

3. RESEARCH RESULTS

Cattell's Sixteen Personality Factor Questionnaire has been applied to define the level of stress-resistance among 186 project managers and 54 students majoring in Project Management [6]. As only separate factors refer to the stress-resistance level of respondents we have accomplished selective analysis by separate factors. Thus C, H, I, O, Q3, Q4 factors testify to the availability of stressful situations effective overcoming skills and practices.

According to C factor (emotional instability – emotional stability) high received scores testify to the ability to cope with stressful situations in a short period of time. In project managers group C factor index tends to a stability pole ($7,39 \pm 1,60$) and denotes emotional stability, discretion, emotional maturity, inherent tranquility, adequate way of feelings expression, real vision of situation and even-minded attitude to own unsolved emotional problems. Managers with a high score by this factor more frequently become leaders in their team though the range of indices is quite broad: low scores can be explained by the reaction of tiredness or excessive disquietude under stress. In students' group this index is lower ($4,80 \pm 1,75$), what may testify to the emotional instability, impulsivity, low tolerance as regards frustration, annoyance, fatigability. Qualitative distribution analysis has

shown that 95% of questioned project managers and 57% of students may be regarded as emotionally mature personalities.

H factor average index (timidity – boldness) takes boldness position in both groups and is approximately identical ($6,53 \pm 1,36$ □ $6,74 \pm 1,57$ in a group of project managers and students respectively). The respondents have an inclination for risk and cooperation with strange people and in unacquainted situations, tend to take independent, unconventional decisions, have a turn for adventurism and leadership qualities manifestation. H factor is distinctly defined; it characterizes the level of activity in social contacts, though it is necessary to consider its genetic origin and property to reflect temperament peculiarities. People with high scores by this factor are persistent, sociable, able to sustain emotional loadings, what helps them become leaders and find solutions in stressful situations. Qualitative distribution analysis has shown that 98% of project managers and 94% of future project management specialists are able to take independent decisions.

I factor average indices (rigidity – sensitivity) relate to the rigidity pole in project managers group ($3,65 \pm 1,00$) and testify to respondents self-confidence, reasonableness, flexibility, practicality, rationality, logicity. So far as the respondents have received the scores of higher negative pole we consider that their hardness mainly reveals itself in practical and realistic approach toward the solution of delivered tasks and in the capability to cope with stressful situations. In students' group this index proved to be higher ($5,35 \pm 1,77$) and testifies to impressionability, emotional feelings variety, inclination for romanticism, empathy. Qualitative distribution analysis shows that anxiety is typical for 20% of project managers and 74% of students.

By O factor (tranquility – anxiety) project managers can be totally described as self-reliant, cool-headed and even-tempered. Low scores by this factor in project managers group ($4,64 \pm 0,94$) describe people who cope with their defeats with ease in contrast to those people who take any defeat as an inner conflict. O factor average index in students' group is considerably higher ($6,43 \pm 1,55$) and testifies to instability, enhanced tension in complicated life situations, extreme shyness and difficulties with other people contacts establishment. Nevertheless it is necessary to take into account that high scores by this factor can have situational origin. Anxiety is typical for 20% of project managers and 76% of students.

Q3 factor average indices (low self-control – high self-control) are high in both groups ($7,64 \pm 1,34 > 5,83 \pm 1,92$ in groups of project managers and students respectively) though in project managers group this index is considerably higher. The respondents are single-minded, have strong will, can control their emotions and behavior, what requires certain efforts application, clear principles availability, social thought consideration. Personalities with high scores possess socially approved characteristics such as self-control and persistence. This factor measures the level of inner control of behavior, personality integratedness. Such people are prone to organizational activity and achieve success in those spheres where objectivity, resoluteness and tranquility are required. Besides this factor is connected with the level of activity in course of group problems solution. Qualitative distribution analysis testifies to the fact that 99% of project managers have high self-control while the percent of students able to control their emotions and behavior makes 83%.

Significant statistical discrepancies have been established in examined groups by Q4 factor (limpness – tension) ($5,91 \pm 1,08 > 3,59 \pm 2,06$ in project managers and students' group respectively). It's worth saying that for successful activity it is quite important to receive

not high or low scores but the golden mean from 5 to 8 points, so long as researches have shown that individuals who have received 5-8 points possess optimal emotional tone and stress-resistance. Thus the average estimation results of project managers range from 6 to 7 points. As regards students their average score by this factor is too much close to the limpness pole and describes the respondents as people having low level of achievement motivation who frequently content themselves with what they have already received. Qualitative distribution analysis testifies to the fact that 90% of project managers and only 30% of students have optimal emotional tone and are stress-resistant.

4. SOCIAL AND PSYCHOLOGICAL TRAINING AS A METHOD OF SPECIALISTS STRESS-RESISTANCE ENHANCEMENT

Project managers professional activity differs by a high level of emotional loading, requires constant display of moral and social responsibility qualities and altruistic behavior as regards subordinates. Regular stresses related to time and resources restrictions can contribute to negative personal changes, dissatisfaction with oneself and one's work, fatigability emergence. For all that indifference, formalism and aggression as regards colleagues develop what is considered as manifestation of psychological protection mechanisms and means of psyche unsuccessful adaptation to durable stressful condition at the initial stage. Labor psychology considers professional destructions as activity and personality formed structure changes which exert negative influence upon labor productivity and interaction with other participants of this process [3]. Project manager personality qualities negative changes (as concerns perception stereotypes, system of values, character, communication means and behavioral patterns), which are regarded as personality professional deformations, more frequently emerge under the influence of professional activity durable fulfillment [7].

Today there are a lot of different technologies as regards stress prevention and overcoming. They include the arrangement of proper working conditions which contribute to stressors level reduction, mastering of stress management means like social, psychological and organizational working environment change; bridge erection between home and work; skills improvement; favorable social and psychological climate creation. Apart from the mentioned technologies in our opinion special attention should be paid to the organization of special trainings to teach participants how to apply relaxation and stressful situations overcoming methods.

We consider social and psychological training to be quite effective method of project manager professionally caused psychological problems overcoming. Russian researcher S. Ryzhenko distinguishes the following advantages of training applied with the purpose to prevent emotional burnout and professional destructions [8]:

- high level of personnel involvement in contrast to individual forms of interaction;
- favorable moral and psychological climate development and support;
- positive influence of a group upon a personality, change of personal opinions, self-assessment and other participants estimation in course of discussions and group dynamics;
- possibility to apply a wide range of practical psychology different directions group methods: role-divided therapy, art-therapy, fairy-tale therapy, body-oriented therapy.

There are diagnostic and intervention stages of social and psychological training. In course of a diagnostic stage the following tasks are to be accomplished:

training participants self-knowledge – their personal qualities perception, communication processes and behavior introspection;
other training participants feedback acquisition;
every participant personality peculiarities external diagnostics procedure offered by psychologist-trainer.

In course of social and psychological training intervention stage every participant disadvantages undergo correction and psychological competency improvement methods are outlined [9].

Trainings aimed at stress-management refer to stress-management sphere. N. Vodopianova and O. Starchenkova determine stress-management as a chapter of management focused on organization stress management theory and practice (organizational stress); professional stress prevention and personnel stress-resistance enhancement [10]. We consider that stress-resistance level enhancement training should be aimed at negative emotions overcoming, mood and motivation correction, professional burnout, anxiety, stressful situations prevention and social and psychological successful adaptation. For this aim implementation it is necessary to analyze and change ineffective strategies of behavior in tense professional or personal significant situations.

We offer the algorithm of effective work with social and psychological stress-resistance level enhancement training participants for future project managers which includes two stages:

on the first stage the environment of open communication and observation shall be created which will help all participants gather required information necessary for the development of stress-resistance certain instructions and dominants accountable for calmness, comfort, confidence in course of professional obligations fulfillment, interest in a selected sphere of activity, high volitional regulation;

on the second stage stressful situations positive visualization shall be put into practice, self-cultivation work recommendations shall be offered in order to cope with available negative emotions, high unreasonable anxiety, stressful conditions and develop personal adaptive qualities.

5. CONCLUSION

Tense managerial activity makes high demands on project manager behavior and activity structure volitional and emotional regulatory mechanisms. When managerial situation doesn't coincide with usual, stereotyped one optimal decision is taken by means of creative intellectual activity which requires exceptional volitional efforts. However every volitional tension causes emotional overloadings resulting not only in breakdowns, neuroses and other diseases, but also arouses compensatory reaction: a person makes an attempt to take decisions relying upon previously developed and already not so exact algorithms regardless of situation and logic. Thus under the conditions of constant tension caused by the necessity to fulfill the required tasks within rather short period of time and under resources insufficiency conditions project managers have to be able to enlist their efforts not to lose self-control and counter stress. Project management sphere specialist stress-resistance level plays an important role. Successful completion of a project depends on the ability to properly organize own and subordinates activity without losing self-control in a responsible moment. The research results have demonstrated that among students

majoring in Project Management there are many people who cannot cope with stressful situations, have increased anxiety and emotional tension which may exert negative influence upon future specialists activity. The application of social and psychological training method will not only teach how to cope with excessive overloading which may lead to stress emergence but also will help apply necessary knowledge and skills received in course of training to prevent stress emergence among the subordinates. As our following task we consider future project managers stress-resistance level enhancement social and psychological training plan and scenario development.

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