Personal Determinants of Stress-Coping Behaviour Demonstrated by Employees of The Ministry of the Russian Federation for Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters

Abstract—This paper analyses individual, psychological, personal characteristics, tolerance to stress, resilience and coping behavior of specialists working in extreme environments. To identify personal determinants of stress-coping behavior demonstrated by male employees of Emergencies Ministry of Russia we interviewed 84 employees of the Moscow Regional Firefighting Service using the Sixteen Personality Factor Questionnaire (16PF) developed by R. Cattell and Hobfoll’s Strategic Approach to Coping Scale (SACS). The data were statistically processed by software program SPSS 16.0.2 and analyzed using Pearson’s correlation coefficient and regression analysis. Study of stress-coping behavior showed that the majority of research subjects used a “healthy” coping strategy manifesting itself in relatively active, assertive behavior, readiness for social contact, seeking of social support combined with low indicators of aggressive and asocial behavior. Regressive analysis of active coping strategy set the multiple correlation coefficient and identified the following reliable determinants of active stress-coping behavior: intellectual (B factor), emotional (C, H factors) and regulatory (G factor) attributes, whereas determinants of passive coping strategy were communicative (L factor) and emotional (O factor) personality traits. Regressive analysis suggests that the choice of coping behavior strategy is determined by personal characteristics. The research findings can be used while recruiting employees of The Ministry of the Russian Federation for Civil Defense, Emergencies and Elimination of Consequences of Natural Disasters (EMERCOM of Russia) as well as taking preventive, remedial measures and providing psychological counselling to reinforce “healthy” coping strategies and if necessary to develop new behavioral patterns.

Keywords—individual psychological characteristics, personal determinants, coping strategy, stress-coping behavior

I. RATIONALE

Recently numerous studies of Russian academics and practitioners (N.N. Simonova, Ya.A. Korneeva, N.Yu. Flotskaya, A.B. Bukhvostov, Ye.N. Ashanina, V.Yu. Rybnikov, A.A. Kuzmenko and others) have been dedicated to studying individual, psychological, personal characteristics, tolerance to stress, resilience and coping behaviour of specialists working in extreme environments.

This is a topical issue for a number of reasons: firstly, hazardous occupations are gaining importance and becoming more dangerous; secondly, occupational hazards are defined by factors (physical and weather conditions, mechanical impact and chemical exposure, uncertainty, abruptness, tight deadlines and others) which can have a destructive effect on personality and mental state of these specialists [2]; thirdly, work in extreme environments is characterized by physical exertion, threat to life and health, continuous psychological stress, high responsibility while acting relatively independently; fourthly, coping behaviour in extreme conditions is one of the most important factors ensuring employees’ adaptability to extreme situations and mental health [5].

Effectiveness of coping effort depends on the type of stress, personality and circumstances. Coping reactions are partially controlled by the personality (personal characteristics) but they also depend on the social environment especially the nature of the stress environment [1]. Analysis of the relevant literature shows that it is important for specialists working in extreme environments to have the following individual psychological characteristics which are key to positive adaptive response and behaviour in extreme conditions: ability to make a cognitive appraisal of tragic events, a sense of purpose in life, ample experience of...
positive life events, social intelligence, “existential tonus”, high confidence level, self-confidence, sustainable positive self-esteem, internality, mental tolerance to stress, resilience, tolerance to extreme situations.

II. AIMS, HYPOTHESIS, METHODS

The aim of this research is to identify personal determinants of stress-coping behavior demonstrated by male employees of Emergencies Ministry of Russia.

We used the following diagnostic methods to study personal characteristics and coping behavior of male workers employed by EMERCOM of Russia: The Sixteen Personality Factor Questionnaire (16PF) developed by R. Cattell [6] and Hobfoll’s Strategic Approach to Coping Scale (SACS). 84 employees of the Moscow Regional Firefighting Service took part in the research. The data were statistically processed by software program SPSS 16.0.2 and analyzed using Pearson’s correlation coefficient and regression analysis.

III. RESEARCH FINDINGS

Analysis of personal characteristics has identified that men in the sample representing a group of EMERCOM employees tend to demonstrate restraint, propensity to practical visual thinking, low level of verbal communication, self-absorption, self-confidence, composure, emotional resilience, ability to withstand emotional distress, need for autonomy, independence, leadership, and self-fulfillment, ability to cope with life difficulties and conflicts and control their emotions and feelings. Study of stress-coping behavior showed that the majority of research subjects used a “healthy” coping strategy manifesting itself in relatively active, assertive behavior, readiness for social contact, seeking of social support combined with low indicators of aggressive and asocial behavior.

Correlation analysis of stress-coping behavior indicators and individual psychological characteristics of EMERCOM rescue team workers demonstrates several stable relations significant at (p<0.05) level. For example, there is an interdependence between a healthy coping strategy and such personality traits as courage (r=0.446), optimism (r=0.526), self-confidence (r=0.556), self-reliance (r=0.475). People with active coping behavior are optimistic, easy-going, composed, self-confident, independent and self-reliant. In some cases, active approach can be asocial.

The study has identified interconnection between assertive actions and self-confidence (r=0.477), courage (r=0.502) and toughness (r=-0.492). EMERCOM employees resorting to assertive action are composed, confident, determined, relaxed, practical, fearless, independent and reasonable. As a rule, such people act based on the logical evaluation of the situation. Seeking social support has a positive correlation with being trustful (r=0.611).

Analysis demonstrates links between asocial behavior and dominance (r=0.458), anxiety (r=-0.495) and being suspicious (r=0.483). Individuals demonstrating asocial behavior in stressful situations tend to seek leadership, power and independence, be tough and aggressive, reserved and pessimistic, irritable, distrustful and self-absorbed.

Indirect coping strategy, i.e. manipulation, is connected with impulsiveness (r=-0.693), emotional instability (r=0.379), self-accusation (r=0.483), being suspicious (r=0.394) and stressed (frustrated) (r=0.475).

EMERCOM employees incapable of taking control of their emotions and impulses are undisciplined, have a conflicting self-image, tend to distrust people, doubt and envy others, be self-condemning and depressed, confrontational, resort to tricks, flatter, deceive, capitalize on other people’s sentiment.

Disadaptive coping strategy of avoidance has a positive correlation with dominance (r=0.470) and impulsiveness (r=-0.470). People trying to avoid solving problems by switching to less important issues tend to be domineering, undisciplined, cannot manage their emotions and ignore social rules. Cautious behavior correlates with anxiety, reserve (r=0.593), propensity to overcomplicate things, to take everything too seriously. Correlation analysis suggests that there are certain relations between personal characteristics and coping strategies used by individuals.

Regressive analysis of active coping strategy set the multiple correlation coefficient and identified the following reliable determinants of active stress-coping behavior: intellectual (B factor), emotional (C, H factors) and regulatory (G factor) attributes, whereas determinants of passive coping strategy were communicative (L factor) and emotional (O factor) personality traits. Regressive analysis suggests that it is personal characteristics that determine the choice of coping behavior strategy.

IV. MAIN AREAS OF PSYCHO-CORRECTION

The research findings can be used while recruiting employees of EMERCOM of Russia as well as while taking preventive, remedial measures and providing psychological counselling aimed at strengthening “healthy” coping strategies and if necessary developing new behavioral patterns. Psychological interventions can be both individual or in a group. The main objective is to create the necessary conditions for the development of verbal communication, mental flexibility, more optimistic outlook and more positive self-image, improvement of communication skills including skills necessary for seeking social support, development of assertiveness, patience, self-discipline, awareness, personal responsibility for one’s actions and acceptance of one’s limitations, self-control, understanding and constructive skills for processing one’s emotions and instincts as well as learning new skills and their constructive processing.

It is possible to meet this objective by organizing a set of psycho-corrective measures based on psychoanalyses. Psychoanalytic therapy is aimed at identifying unconscious causes of different emotional experiences (including distress) their types and expression and at taking the subconscious elements of the psychological structure under control by processing emotional experiences. This in its turn will result in more adaptive behavior [4].

The methods within this approach focus on identifying people’s unconscious motives underlying their behavior. They make it possible to concentrate on inner forces helping to cope with difficulties independently and facilitate realization of subjective perception of reality with further ability to change one’s reaction. Mobilization of inner resources can predetermine preference of adaptive coping strategy. Psychoanalytical therapy uses classical methods of
psychoanalysis: free associations, oneirology, interpretation, transference analysis, resistance analysis.

Setting with rigid restrictions is instrumental during correction. It implies regular meetings with clear time limits, a set location and permanent group members, which contributes to a stable external and later internal environment for more in-depth work with intrapersonal experiences and creates conditions for correcting lack of self-discipline, disregard of social conventions, avoidance of problem-solving. It also contributes to developing one’s intrapersonal boundaries.

Psychoanalytical individual structural model makes it possible to lay down the key areas of psycho-correction:

1. To strengthen ego as a source of resolving intrapersonal contradictions and making decisions concerning the preferred behavior, which will shape a more comprehensive self-perception and perception of others, one’s real abilities, will ensure emotional resilience, contribute to developing a consistent system of conscious actions in extreme conditions, will help to improve the ability to integrate good and bad aspects of reality and not to dissociate them, all of which will lead to a better judgement of reality.

2. In case of rigidity to weaken superego, the inner controller and punisher, responsible for morality, morals, duty and human values. This will make it possible to mitigate self-condemnation, self-abasement in case of failures at work, will reduce excessive anxiety and fear which can lead to misguided behavior.

3. To work through destructive instincts stemming from the unconscious id as a source of unconscious elements guided by the pleasure principle. This will help to reflect on the death instinct its existential dimension, will protect from replaying aggressive impulses through binding psychic energy in the unconscious [3].

It is important for psycho-correction to take into account prevailing defensiveness with further development of higher-level defensiveness (repression, rationalization, intellectualization, affect isolation, reaction formation, humor, sublimation) and less frequent use of lower-level defensiveness (denial, omnipotence, enactment, extrajection, devaluation, somatization, dissociation).

Comprehensive psycho-correction in conjunction with thorough psychoanalytical understanding of one’s own feelings while performing one’s professional duties is aimed at realization, understanding and adequate interpretation of one’s feelings, instincts and actions for a more conscious choice of constructive coping strategy, and it can result in higher performance. Psychoanalytical psycho-correction requires psychological training for specialists providing psychological counselling to employees.

Expert psychological interventions focused on the personality of EMERCOM employees can collectively increase probability of using “healthy” coping strategies and reduce the incidence of posttraumatic stress disorder (PTSD) as well as emotional burnout syndrome.

REFERENCES