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RESEARCH ON COGNITIVE BEHAVIOURAL COPING IN THE CONTEXT OF INTERVENTION AND RESCUE ACTIVITIES

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***Abstract:** Potential coping strategies can be influenced, exchanged, learned or forgotten, through different ways such as psychological training programs, personal experiences or psychotherapy. Coping can't be labelled as functional or dysfunctional on itself, its' success depending on a multitude of personal and environmental factors. Knowledge of coping strategies used by individuals in stressful situations related to rescue activities represents the starting point in developing psychological programs, aiming at developing adaptive coping strategies and increasing rescuers' psychological well-being.*

***Key words:** coping, stress, trauma, psychological well-being, rescuer*

1. INTRODUCTION

As proved by recent events (i.e. 2020 pandemic), we live in an instable, unpredictable in every way world, constantly demanding people adaptation efforts and continuous development of new skills and attitudes. Stress is normal and inevitable in everyday life and also an inevitable part of almost all types of work, especially the work of first responders such as intervention and rescue personnel. Stress is an emotional, cognitive and physical response to a challenge and occurs when outside demands exceed the individuals' perceived ability to cope with them. It is very important to point out that individuals experience and respond differently to stress. Also, stress sources are varied and often subjective. Two people experiencing the same stressor may have different reactions to it. For example, based on different life experiences, knowledge and use of constructive coping strategies vs. disadaptive ones, after a rescue intervention, not all rescuers will experience suffering or long-term emotional problems [1].

The individual makes a number of efforts to cope with high demands to which he is subjected and responses to stressful events depend on how that certain event is perceived. So, it's not what's

happening that's important, it's how we relate to what's going on. Most of the stress in individuals' lives comes from the way one understands at and interprets events around him [2; 3]. This notion, that the severity of stress response depends on the assessment of an event is an essential point of utmost importance, relevant in study of intervention and rescue activities.

If rescuers and victims of critical situations consider their situation to be hopeless, the more it becomes so and individuals will be inclined to act impulsively or simply give up. If rescuers believe there is no chance of a successful rescue action, failure becomes more likely. If, on the contrary, both rescuers and victims have confidence in their ability to act for their own well-being, if they have confidence in their training and equipment, they are more likely to succeed in actions they take [4].

2. OVERVIEW OF INTERVENTION AND RESCUE ACTIVITY

Staff working and responding to emergency situations includes large groups of professionals, from career firefighters and volunteers, rescuers, police officers, emergency medical staff to

psychologists. Intervention in case of critical situations, major disasters, etc. involve rescuers technicians from rescue organizations, additional medical personnel, military personnel, anti-terrorist forces, construction workers and numerous volunteers, etc. Depending on event location, intervention and rescue personnel need specialization, for example lifeguards, mountain rescue or rescue at high altitudes. Current environmental, economic, and political developments and data on future trends suggest an increase in severity and frequency of disasters and critical situations requiring rescuers' intervention [5].

Phenomena supporting this assumption include increased energy consumption, progressive global warming, climate change and pollution, population growth, worldwide dispersion of industrialization, expansion of transport facilities and growing spread of terrorism. The growing issue of protecting workers in emergency situations against occupational safety and health risks has been highlighted as a priority by many experts.

Priorities of intervention and rescue personnel are protecting human life, property and the environment, and their most common areas of action include: daily emergencies, natural disasters, industrial and transport accidents, massive public events.

A complete definition of intervention and rescue activity might be: a specialized response to an emergency situation that endangers lives, property and functioning of an organization. The mission of intervention and rescue personnel is to respond to natural or man-made disasters and crisis situations that threaten safety and well-being of others. They expose themselves to personal and psychological trauma in order to take care of the health and safety of others. This profession exposes individuals to a higher rate of both physical and psychological personal threats, while also witnessing the trauma of others. The traditional heroic role of intervention and rescue personnel includes expectations (and self-expectations) that these individuals are to some extent superheroes. However, this professional category is, like any other, affected by work related stress. Daily wear and tear at work has an important impact on physical and emotional health of this professional category.

Occupational trauma refers to responding to and/or witnessing a real or perceived threat to safety/integrity of oneself or others, which may lead to intense fear or helplessness, during an intervention and rescue action. Research suggests that feeling "powerless in the face of an event" is often what causes individuals to experience the event as traumatic [6].

3. INDIVIDUAL REACTIONS TO POTENTIAL TRAUMATIC EVENTS

Most individuals will most likely develop a series of reactions, as normal responses to abnormal events they face and will soon return to their previous psychological functioning. Another part will remain affected for a longer period, will present emotional sequelae and will eventually require specialized treatment to be able to return to previous functioning. There is also the possibility that, even after professional treatment, a small part of individuals will never fully recover. It is difficult to make predictions regarding the degree to which an individual could be affected by a potentially traumatic event. However, there are ways in which the individual can be supported in the direction of personal development to increase psychological resilience, to develop adaptive coping behaviors and cognitive patterns. Literature [7] presents the following prototypical trajectories that occur as a result of exposure to potentially traumatic events:

- Resilience, which occurs in 35-55% of cases. Resilience is characterized by short period and low-intensity disturbances. Resilient individuals may also initially experience a brief but relatively intense moment of distress or may struggle for a short period of time to maintain mental balance (e.g., several weeks of sporadic difficulty in focusing attention, intermittent insomnia, etc.);
- Recovery, which occurs in 15-35% of cases. Healing is characterized by moderate to severe initial symptoms, which interrupt normal functioning, followed by a gradual decrease in symptoms over several months, before returning to pre-traumatic levels;
- Delayed reaction, which occurs in 5-10% of cases. Delayed reaction is characterized by

moderate to mild initial symptoms, which interrupt normal functioning, followed by their worsening, reaching severe levels.

- Chronic reaction, in 10-30% of cases. Chronic reaction is characterized by the occurrence of severe symptoms that disrupt normal functioning and which, although slightly fluctuating, persist on long term.

Factors that can influence a person's response to a critical situation include a history of psychological deficiencies, personal values, how the threat is perceived or personal significance of event for the participant, attitudes, presence of warning or lack of preparation time and the ability to distance oneself from the event.

Protective factors are represented by internal and external aspects such as social support, optimism, hope, which can shape post-traumatic outcomes having the potential to change them in a positive direction. Thus, protective factors that can mitigate negative effects include [8]:

- Personal factors such as: social competence, problem solving skills, motivation, autonomy, independence, self-esteem, self-efficacy, locus of control, temperament, intelligence, assertiveness, impulse control, emotion regulation;
- Personality factors: optimism, extraversion, openness to experiences, agreeableness, conscientiousness, spirituality;
- Social support;
- Higher incomes and education;
- Successful mastery of past disasters and traumatic events;
- Limiting or reducing exposure to any aggravating factors;
- Providing information on recovery expectations and availability of recovery services;
- Care, empathy and understanding from loved ones and specialized staff;
- Providing regular and adequate information on emergencies and ways of intervention.

Stress reactions are usually temporary and can last for different periods of time. Most individuals find that their reactions to stress have improved or completely disappeared within four weeks of exposure to a critical traumatic incident. If symptoms continue after four to six weeks, the individual may be vulnerable to

developing a more chronic condition, such as post-traumatic stress disorder. Conceptually, there are 4 major types of reactions: cognitive, physical, emotional or affective and behavioral.

Physical symptoms (physical shock) represent the first and most profound effect of experiencing a critical incident: sleep disorders, nightmares, chest, neck and back pain, gastrointestinal disorders, appetite disorders, headaches, dizziness, muscle tremors, increased risk of catching a flu etc.

People involved in critical incidents also report a wide range of emotional reactions. These generally do not occur immediately after the trauma, but after the physical shock has worn out, usually the next day: guilt, irritability, anxiety, feeling of loneliness, grief, anger, depression, shock, sadness, suicidal thoughts, denial, feeling overwhelmed, distrust.

Cognitive symptoms may include denial, lack of concentration, flashbacks, altered perspective on life, short-term memory problems, nightmares, problem solving difficulties, confusion, blaming others, difficulty in taking decisions.

Behavioral symptoms may include: episodes of crying for no immediate reason, loss of interest in work, increased use of alcohol / drugs, withdrawal, loss of interest in everyday life, increased accidents, compulsive need to discuss the incident, antisocial behaviors, hypervigilance, strong startle reflex.

4. COGNITIVE BEHAVIOURAL COPING: CONCEPT AND CLASSIFICATION

We define coping as ever-changing cognitive and behavioral efforts to manage specific external and/or internal requests, that the individual assesses as exceeding personal resources. [9] Coping strategies refer to rather stable styles of managing stressful events, but not to such an extent that they are assimilated to personality traits. Coping strategies are also flexible in nature, resulting from the fact that individuals systematically use various coping strategies in different situations [10].

Coping can also be defined as any healthy or unhealthy, conscious or unconscious effort to prevent, eliminate or weaken stressors or to

tolerate their effects in the least painful manner possible. A particularly important aspect of this definition is that coping efforts are not always healthy and constructive [7].

Coping strategies may be categorized as problem-centered coping and emotion-centered coping strategies.

Problem-centered coping aims to change the person - environment relationship, acting on the environment and/or the individual [9]. It refers to efforts to resolve the problem or to take control of the situation causing discomfort or suffering.

According to literature [7] problem-centered coping includes various active coping strategies such as: defining the problem, gathering information, generating alternative solutions, evaluating alternatives in terms of costs and benefits, decision-making, planning and resolving conflicts, seeking social support, etc. In general, problem-centered coping strategies are considered more useful/desirable than emotion-centered ones.

Emotion-centered coping aims at managing emotional responses when confronting a stressful event. Emotion-focused coping styles aim at reducing, mitigating and/or minimizing unpleasant emotions associated with stressors. Usually, emotion focused styles of coping are more likely to occur when there has been an appraisal that nothing else can be done to modify harmful, threatening, or challenging environmental conditions [11].

Emotion-focused coping involves denial, positive reappraisal or/and seeking social support, religion, humor, acceptance, avoidance, minimization, distancing, selective attention etc. Basically, this cluster includes all of those strategies that change the meaning of a stressful situation without really changing the reality of it.

These two types of coping support and enhance, but also impede each other: emotion-centered coping creates the conditions for better resolving the problem, and problem-centered coping reduces emotional distress through a more realistic assessment.

The choice of coping strategies depends not only on the goals a person pursues, but also on other elements such as age, gender, social environment in which the person lives, type of activity in which he or she is involved, etc. [10;

11]. Also, coping is determined by personal resources, including health and energy; existential beliefs or general beliefs about control, commitments, problem-solving skills, social skills, social support and material resources. The use of these resources might be mitigated by certain (personal and environmental) constraints, such as: internalized cultural values and beliefs that proscribe certain ways of behaving and psychological deficits, demands that compete for the same resources, high levels of threat etc. [9].

It is very important to remember that coping strategies can be influenced, exchanged, learned or forgotten, through different ways such as psychological training programs, personal experiences or psychotherapy.

5. RESEARCH ON COGNITIVE BEHAVIOURAL COPING IN INTERVENTION AND RESCUE PERSONNEL TRAINED WITHIN INSEMEX

Following previous published research [12] we continued to investigate coping methods most often used by rescuers trained within the National Research-Development Institute for Mining Security and Explosive Protection – INSEMEX. As previously, the instruments used for this purpose were Strategic approach to coping scale SACS (on a number of 65 individuals) and Cognitive emotion regulation questionnaire CERQ (on a number of 97 individuals). Subjects of previous research were under training rescuers, as opposite to subjects of current research, represented by already trained rescuers, undergoing re-training courses.

Both investigative approaches mentioned above are intended to serve as support in developing a psychological training program for rescue personnel trained within INSEMEX, with a view to learning/developing coping strategies whose use is most likely to contribute to reducing stress associated with rescue interventions.

The Strategic approach to coping scale SACS is a tool that assesses the behavioral dimension of coping, also considering the social aspects of strategies by which someone copes with stressful situations.

Table 1

Results for SACS test			
SACS coping strategies	Under population average (%)	Average (%)	Over population average (%)
Assertive action	11	77	12
Social joining	5	55	40
Seeking social support	0	68	32
Prudent action	5	61	34
Instinctive action	3	51	46
Avoidance	12	68	20
Indirect action	17	78	5
Antisocial action	31	67	2
Aggressive action	15	83	2

Table 2

Results for CERQ test			
CERQ coping strategies	Under population average (%)	Average (%)	Over population average (%)
Self-blame	31	18	51
Acceptance	34	25	41
Rumination	39	11	50
Positive refocusing	13	22	65
Refocusing on planning	15	15	70
Positive reassessment	22	18	60
Putting into perspective	29	24	47
Catastrophizing	37	14	49
Blaming others	32	28	40

Cognitive emotion regulation questionnaire CERQ is a multidimensional questionnaire, built to identify the cognitive coping strategies that someone uses after experiencing negative events (referring exclusively to thoughts of a person).

The most common coping strategies used by respondents (Table 1 and Table 2) are social networking, seeking social support, prudent action, instinctive action, self-culpability, rumination, focus on planning, positive refocusing, catastrophizing. Although a coping strategy cannot be labeled as functional or dysfunctional in itself, studies indicate that avoidance, antisocial action, instinctive action, self-culpability, rumination, catastrophizing are commonly associated with emotional problems or psychopathological symptoms. On the other hand, social networking, seeking social support, to some extent prudent action, focusing on planning and positive refocusing are considered more useful and are associated with adaptive results and positive effects on the well-being of individuals.

6. CONCLUSION

Therefore, we can conclude that intervention and rescue personnel re-trained within INCD INSEMEX, use both adaptive strategies and strategies whose use is associated with emotional and even psychopathological problems.

Based on the findings, future research could lead to development and implementation of a psychological intervention and information program, teaching rescuers and under-training rescuers to identify and use the most constructive coping strategies. Such a program could include some of the following aspects: increasing self-confidence, developing problem-solving skills, work in the direction of replacing automatic negative thoughts with positive ones, learning proper use of constructive coping strategies, learning breathing and relaxation techniques as “first aid” in case of stressful situations etc.

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Cercetări privind copingul cognitiv-comportamental în contextul activităților de intervenție și salvare

Rezumat: Potențialele strategii de coping pot fi influențate, schimbate, învățate sau uitate, prin diferite metode precum programele de pregătire psihologică, experiențele personale sau psihoterapie. Copingul nu poate fi etichetat ca fiind funcțional sau disfuncțional în sine, succesul acestuia depinzând de o multitudine de factori personali și de mediu. Cunoașterea strategiilor de coping utilizate de indivizi în situații stresante, legate de activitățile de salvare, reprezintă punctul de plecare în dezvoltarea programelor psihologice, care vizează dezvoltarea strategiilor adaptative de combatere a efectelor negative ale stresului și creșterea bunăstării psihologice a salvatorilor.

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