

Research on Stress Capacity Building of Fire Forces in Emergency Rescue

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Abstract

Fire personnel in the process of emergency rescue, often high risk factor, the effective rescue time is short, in the rescue scene and its emergency positive stress response is rapid, timely, efficient, fire fighting key factors, is the emergency response, the correct disposal of fire prerequisite, to reduce casualties, reduce economic losses plays a very important role. To reduce the fire officers and soldiers in the emergency response of the psychological pressure, make its positive stress response, through the relevant literature and expert interview method, this paper expounds the firefighters of a series of stress response to emergencies, to reduce the casualty rate of firefighters and rescue after the relief of the psychological stress disorder is of great significance.

Keywords

Stress response; Stress ability; Countermeasures and suggestions.

1. Introduction

With the accelerating development of China's urbanization and emerging emergencies, in the face of unpredictable changes in the rescue site, complete fire facilities are important, but how to carry out emergency rescue tasks in a good state and to play the maximum potential and efficient rescue needs in-depth discussion. As emergency rescue main force and the national team, in the "whole disaster, big emergency" emergency scenario rescue trapped life and property safety, reduce the trapped casualty rate and rescue casualties at the same time, can avoid or reduce the chance of acute psychological trauma disorder, to promote the modernization of national management system and management ability, build a new era of emergency ability system has important practical significance.

2. The Conceptual Definition of Stress Response

Experts and scholars in various fields of psychology, medicine, sociology and management have different conceptual interpretations of stress. In the 1930s, the Canadian physiologist Selye Hans (Selye Hans) first proposed the concept of stress: a nonspecific adaptive response of the body to nervous stimuli. Subsequently, stress response theory is widely used in medicine or pathology. Lazarus, the pioneer of modern cognitive stress theory, emphasizes the cognitive evaluation of stressors. Based on the general adaptive syndrome, he emphasizes the individual psychological factors and cognitive factors. Jiang Qianyuan, a famous medical scientist in China, proposed that more than twenty factors interact and influence stress. Chen Yizhang, a famous physiologist, believes that stress is a non-specific response when the body is strongly stimulated or harmful stimuli[1].

From the perspective of emergency management, we can know that stress is the psychological, physiological and behavioral response of the series through non-specific adaptation of emergency scenes (stressors) through psychological intermediary factors (such as cognitive evaluation, skill level, social support, personality characteristics and stressor in previous

experience, etc.). Stress is divided into positive stress response and negative stress response. Positive stress response, also called positive stress, refers to a series of behaviors that individuals can calmly, rationally and quickly respond to stimuli according to the knowledge, skills and previous direct or indirect experience in the face of stressors. If the firefighters can calmly analyze the current situation of the fire site according to the characteristics of the fire and the previous experience, learned skills and good psychological quality, use all the resources around them, quickly make a correct judgment and take the correct behavior to deal with it, this is a positive stress response. Negative stress response, also known as negative stress response, refers to the individual in the face of stress or abnormal stress, the emergence of excessive psychological stress, manifested as a blank brain, dull eyes, slow behavior or inaction and a series of correct response obstacles, affect the body's normal play or unable to make appropriate behavior response. If firefighters are in a poor emotional state or lack of experience in the police, smell burning, hear crying, see the house collapse of the body, the body remains may produce fear, tension or dull thinking, behavior at a loss, unable to take the right measures to deal with, produce a negative stress response. This negative stress reaction not only hinders the smooth progress of the fire fighting work, but also can not rescue the trapped people in time, and even threatens the lives of the rescue workers, causing unnecessary casualties.

3. Stress: The Application of Psychology to Emergency Management

In 2018, the Ministry of Emergency Management was established under the reform of state institutions. We have gradually formed an emergency rescue force with comprehensive emergency rescue teams as the mainstay, supplemented by professional emergency rescue teams as the support, and supplemented by social (non-governmental) rescue teams. The fire team has been engaged in emergency rescue work for a long time, which is paramilitary, and has incomparable advantages to other emergency rescue forces in terms of professional skills, equipment and facilities, and actual combat experience. "Emergency response", as the execution behavior of "stress" response, is an equally important issue to improve the efficiency of emergency response by studying the stress response while strengthening the professionalization of fire officers and soldiers. "Emergency" refers to a series of human actions of emergencies in the whole life cycle. "Stress" refers to a state of emotional fluctuations caused by the changes in the external conditions. This state achieves the balance through the adjustment of various organs inside the body, thus increasing the activity force of the body to cope with an emergency.

3.1. The Test of the Frequent Period of Major Historical Accidents

Since the outbreak of COVID-19, China has also entered a period of serious and major accidents. Compared with general or major emergencies, once major emergencies occur, they will have a serious negative impact on people's physiology and psychological. The fourth industrial revolution, mainly with artificial intelligence, new energy and new materials, has developed rapidly, and new production safety accidents are constantly derived. Behind the high integration of human civilization, public health events also appear frequently, which seriously endangers people's health and life safety, and causes great negative impact on the orderly development of social economy. During this period, major workplace accident severely bruised people's normal emotional and emotional stability, especially major workplace emergency emergency disposal of a line of fire officers and soldiers, the impact on its body, psychological pressure is often beyond the scope of normal can accept, fire officers and soldiers stress related problem research has also been put on the agenda, and gradually growing analysis of one of the key problems of emergency disposal efficiency.

As we know, once a major accident occurs, it is very easy to generate other emergencies, and the stressor is multiple and seriously negative. At this time, the front-line fire rescue officers

and soldiers are the first to respond. "Stress" occurs in front of the "emergency", only the organism to make a positive stress response to use all resources, better make correct emergency response, disposal of emergencies, and even the outbreak in the bud, at the same time, the stress response training and workplace accident emergency management plan and practice also has certain relevance. However, stress can better give full play to people's initiative, which is the fundamental place for fire officers and soldiers to make correct behavior or decision-making when facing the stress source of serious and major accidents, and it is the fundamental element to solve the problem. To sum up, we can know that both "stress" and "emergency" interact with each other. The stress response made by firefighters in the emergency response is closely related to their psychological quality, emergency knowledge, experience and lessons, physical quality and other factors.

3.2. The Transformation of "Single Disaster Species" to "Multiple Disaster Species"

In the new era, we are now facing more emergencies than at any other time in history. With the rapid development of urbanization, information technology, the disaster factors increasing, emergencies present a composite superposition, major natural disasters, serious man-made accidents, economic crisis and other factors appear at any time, and even a variety of disaster factors superimposed on each other, seriously affecting people's life safety, the steady development of economy and social stability and prosperity. When fire officers and soldiers participate in the emergency response process, there are more and more uncertainties, and the stressors are also increasing, and the psychological endurance of fire officers and soldiers is also more and more higher requirements. At the scene of emergency response and rescue of emergencies, firefighters' psychological condition, physical quality and their ability to withstand high-intensity operations are important factors affecting their stress response.

First of all, in the emergency process, the emergency situation is unpredictable and controlled, will have a significant impact on the behavior of the firefighters, either use all the available resources around, to make the correct judgment and behavior, emergency; or in the face of the current stressor stimulation and instinctive fear and tension, resulting in the behavior becomes slow, or even the thinking stagnation. In the face of the complex and changeable emergency environment, time is life. Accidents always threaten the lives and safety of the trapped people, and they also severely test the professional level and rapid stress ability of firefighters. At present, new emergencies continue to arise, and disaster factors are compound. In the process of emergency response, even a little hesitation or failure to respond in time can threaten the lives of firefighters. Secondly, it takes a certain time from emergency response to the situation under complete control. During this period of emergency response and rescue time, firefighters are highly concentrated, with severe physical load, and physical energy loss is large. In a state of fatigue, it is easy to produce psychological stress. Therefore, it is necessary to integrate the stress response behavior through the emergency response and rescue and relief of fire officers and soldiers to improve their emergency rescue capacity and improve the speed of rescue and relief.

4. Fire Officers and Soldiers Stress Ability to Improve The Way

4.1. Carry Out Psychological Assessment To Enhance The Psychological Carrying Capacity

Firefighters should develop positive cognitive coping and action response habits. First, they should evaluate stress events with a confident and capable stress control optimistic attitude before the emergency occurs, so as to help more effectively deal with stress psychologically. Fire department can hire relevant psychological experts to give regular lectures to help

firefighters learn psychological knowledge. During the stress explanation, they can guide their mood or psychological state, teach them psychological adjustment, or encourage themselves, and improve the psychological tolerance of firefighters in the rescue site; second, take obvious actions to prevent post-traumatic acute stress disorder of firefighters. Experts give lectures to firefighters after completing the emergency rescue and relief task, listen to the psychological state of rescue workers at the scene of the emergency, and give answers, and improve the knowledge level of firefighters' psychological stress, so as to help colleagues, the public or trapped groups. At the same time, systematically studied in the process of fire fighting and rescue fire personnel may appear various psychological problems, to improve fire psychological capacity and psychological recovery level, is of great significance to improve the emergency rescue system^[2], psychological experts can according to the firefighters overall stress response to make recommendations to relevant departments, promote the perfection of the fire control training system, help firefighters improve the "combat" effectiveness".

4.2. Strengthen Functional Exercise to Ensure Excellent Physical Quality

Psychological strength often needs the strong physical quality as its support, fire officers and soldiers can strengthen the physical function of the exercise perspective, make them to respond to the negative stressors, so that the negative stressors into a positive emergency source or reduce the impact of negative stressors on individuals. In short, firefighters can according to a variety of different types including fire, flood, earthquake, accidents and disaster emergency stress training and different simulation scenarios, and various kinds of emergency stress training to achieve certain proficiency, in the face of firefighters in emergencies, according to the previous stress simulation training experience, quickly find out the common response to emergencies, make the correct response, timely solve problems, the fastest and minimize emergency personnel damage and economic loss, etc. Therefore, firefighters should strengthen their physical fitness in daily training, organically combine physical training and psychological training, and ensure excellent physical quality. It is also particularly important to have skilled physical recovery training in the process of combat readiness and duty^[3]

4.3. Carry out Stress Training to Strengthen the Stress Disposal Efficiency

Due to the particularity of firefighters work, fire officers will inevitably contact smoke, high temperature, dark explosion, collapse, screaming, body incomplete such as negative stressors, so how to let it through stress training, positive stress response, to avoid or reduce the negative stress response, need to establish stress training system, constantly training firefighters in the stimulation of negative stressors, namely desensitization training. Experts proposed to deal with negative stress and taste positive stress dual stress management mode, namely on the one hand, predict and control negative stress, on the one hand, provide and induce positive stress, reduce the influence of negative stress and induce positive stress at the same time, coordinate, complement each other, maximum efficiency to improve the fire officers and soldiers stress ability, desensitization training is the top priority and the best choice.

Desensitization training refers to the specific classification of the types of negative stressors in all kinds of emergencies, and then the targeted muscle relaxation training for firefighters under the guidance of professionals, so as to gradually reduce the sensitivity to these stimuli. Fire officers and soldiers desensitization training process, present the negative stressor can choose they often face major fire scene, earthquake scene or explosion video pictures, make them gradually adapt to the harsh scenes, reduce the future disposal of these events, sensitivity and fear in the scene rescue calm, calm, stimulate its potential, make the ability of positive stress. With relevant advanced information technology, the fire department can develop and design virtual real fire scene, such as fireworks training facilities and real fire training room. It can also design new emergencies, add the audio to the fire scene, simulate the emergency scene, imitate the rescue site, observe the psychological and brain reaction, summarize the stress response

rules in the rescue scene, and analyze the factors affecting the stress response, so as to develop the corresponding training system to achieve the desensitization standard.

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