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FEATURES OF PROFESSIONAL ACTIVITY OF SPECIALISTS OF PRIMARY TACTICAL FIRE AND RESCUE UNITS SES OF UKRAINE IN THE CONDITIONS OF EMERGENCIES

Стаття присвячена аналізу умов професійної діяльності працівників первинних тактичних пожежно–рятувальних підрозділів ДСНС України через призму особливостей емоційної сфери та психічних станів, що виникають у працівників аварійно–рятувальних підрозділів ДСНС України під час виконання професійних завдань в умовах надзвичайної ситуації.

Наведено основні психічні стани та реакції, що виникають у рятувальників в умовах надзвичайної ситуації. Охарактеризовано найбільш типові умови і стрес–фактори, що найчастіше зустрічаються при виконанні рятувальниками свого професійного обов'язку і призводять до виникнення негативних психічних станів.

Ключові слова: професійна діяльність, первинні тактичні пожежно–рятувальні підрозділи, відділення, бойове завдання, пожежні автомобілі.

Статья посвящена анализу условий профессиональной деятельности работников первичных тактических пожарно–спасательных подразделений ГСЧС Украины через призму особенностей эмоциональной сферы и психических состояний, возникающих у работников аварийно–спасательных подразделений ГСЧС Украины во время выполнения профессиональных задач в условиях чрезвычайной ситуации.

Приведены основные психические состояния и реакции, возникающие у спасателей в условиях чрезвычайной ситуации. Охарактеризованы наиболее типичные условия и стресс-факторы, наиболее часто встречающихся при выполнении спасателями своего профессионального долга и приводящих к возникновению негативных психических состояний.

Ключевые слова: профессиональная деятельность, первичные тактические пожарно-спасательные подразделения, отделения, боевая задача, пожарные автомобили.

Formulation of the problem. The activities of the staff of the SNS of Ukraine, in contrast to many other professions, are associated with the conditions of constant extremity: responsibility for life and health of staff, execution of tasks; provision of operational readiness of technical means; high temperature and concentration of combustion products; work at height; significant physical activity during the salvation of people and material values, etc. Attention should also be paid to the lack of modernization of the units with modern fire and rescue equipment, and the low level of social and medical protection of the specialists of this field. This list can be continued, but due to all the above circumstances, there is a problem of ensuring the proper professional and psychological readiness of the staff [1; 2].

Analysis of recent research and publications. The analysis of the scientific literature shows that in the national psychology among of a number of psychological research various aspects of workers of professions related to the risk (professional and psychological deformation, occupational stress, social and psychological foundations of mental health preservation, individual adaptation to the special conditions of activity, and psychological characteristics and determinants of suicide, industrial traumatism, professional selection, psychological training, syndrome of “burnout”, behavioral strategies for coping of stress in a professional activity, forecasting of professional dependability etc.), questions of specifics of professional activity primary tactical fire–rescue units was paid a little attention [4].

Setting objectives. The purpose of the article is to analyze the professional activity of the workers of the primary tactical fire and rescue units of the SES of Ukraine from the point of view of psychological peculiarities.

Presenting main material. Operative work of fire-rescuers in its content refers to those activities that are constantly associated with severe and harmful conditions, which are reflected in the unusual and high emotionality of the practical activities of specialists of the SES of Ukraine.

Specific features of professional activity of fire-rescuers are:

- continuous nervous–psychic stress, caused by systematic work in unusual conditions (high temperature, high concentration of smoke and other combustion products, limited visibility, etc.). constant threat to life and health (possible collapse of buildings and structures, explosions, poisoning with

dangerous chemicals), negative emotional influences (transportation of injured and burned people, corpses, etc.);

- intense physical activity associated with dismantling of structures and facilities, work with rescue and fire-fighting equipment of different purposes, high speed of work, etc.,
- overcoming the difficulties caused by emotional and intellectual stress associated with the need to maintain the intensity and concentration of attention continuously and for a long time, aimed at monitoring the changes in the external environment, to keep in sight the state of various complex constructions, technological units and facilities in the process of performing the operational task at the facility during the quenching of the fire or the elimination of the consequences of the accident;
- difficulties due to the need to work in a confined space, that is, the need to perform a operational task in tunnels, underground communications, cellars, etc., which greatly complicates the actions, violates the usual ways of movement (for example, movement and work during for a long time);
- work in oxygen-insulating gas masks and compressed air apparatus devices, which restrict movement, worsen breathing, complicates communication;
- constant high responsibility of each fire-rescuer with relative autonomy of actions and decisions aimed at saving people, material values, etc.;
- the presence of unexpected obstacles, which complicate the task execution [5].

For the purpose of performing fire extinguishing tasks, certain forces (that is, those who deal with the extinguishing of fires) and means (equipment and extinguishing agents used to extinguish fires) are involved.

The main and decisive force in carrying out operational tasks in the fire is the staff of the fire departments of the SES of Ukraine.

The means that provide operative actions on a fire are:

- ✓ fire engineering (trucks, fire extinguishing systems, fire-fighting equipment, etc.);
- ✓ equipment capable of supplying water and other fire-fighting equipment adapted and refitted for the purpose of fire fighting;
- ✓ extinguishing agents (water, foam, powders, gases, etc.);
- ✓ means of communication and lighting;
- ✓ vehicles.

In most cases, firefighting vehicles with appropriate fire trucks and reserve of extinguishing agents are used to extinguish fires. Depending on their purpose, they are divided into main, special and auxiliary ones.

The main ones include fire trucks intended for delivery to the firefighting place of personnel and supply of the extinguishing agents (water, foam, non-combustible gases, gas mixtures and other substances and

mixtures) to the combustion zone: Pump water tender, pumping appliance, airfield appliance, automobiles of air-foam, powder, carbon dioxide and gas-water extinguishing, etc.

Special fire trucks are designed to carry out special fire works (lifting personnel at height, providing communication and lighting, fighting smoke, laying hoses lines, etc.). A group of special fire trucks includes: communication and lighting vehicles, technical and gas protection services, turnable ladder and aerial appliance, smoke extraction trucks, hose tender and others.

Auxiliary fire trucks are intended for maintenance of main and special fire trucks, delivery of personnel and equipment to the place of fire and other support work. These include: car repair shops, refuelers, trucks and other cars that fire brigades are armed.

The operative service personnel (commander of the squad, the driver, the firefighters) are assigned to each fire truck that is in operational duty. Their number for each fire truck is determined by the intended purpose of the truck, as well as its mark, type and local conditions of the object or area, which are guarded. In rural areas and at industrial facilities, operative services with fire truck can be complemented by members of voluntary fire brigades.

Operative service on the main and special cars are called squads. For each squads, a service record sheet is drawn up, which specifies the duties of commanders, drivers, senior firefighters and firemen in the acceptance of duty, collection on anxiety, as well as when working in a operative environment during the extinguishing of fires.

The squad on a pump water tender or pumping appliance is the primary tactical unit of the fire and rescue service capable of performing individual tasks for the rescue of people, and the extinguishing of a fire.

The main tactical unit of the fire and rescue service, capable of solving tasks independently, depending on their tactical capabilities, is the guard of two or more squads on the main fire trucks.

One of the main tasks of the staff of the SES of Ukraine is the extinguishing of fires. Operational actions for the extinguishing of fires in accordance with tactical capabilities is carried out by the staff of the guards and squads. The tactical capabilities of the fire department are the capabilities of the staff on whose arms fire trucks, fire and technical equipment, extinguishing agents, effectively carry out operational tasks at a specified time.

In Ukraine, on the arsenal of fire safety garrisons there are 4169 fire trucks of different purposes, of which 3169 pump water tender, which is 76% of the total.

The pump water tender squad that has a supply of water and the foaming agent can drive directly to the place of fire and without installing a car on a water source to perform certain operational tasks in the following circumstances:

- ✓ when the extinguishing agent of a fire truck is enough to eliminate the fire;
- ✓ If you need to immediately supply fire extinguishing agents to provide saving people in a fire;
- ✓ when immediate supply of extinguishing agent is required to prevent explosions, accidents, destruction of structures and apparatuses from the effects of high temperature;
- ✓ if necessary, to restrain the rapid propagation of fire in the main direction during the deployment and introduction of forces and means of others squads that arrived on a fire;
- ✓ to provide a nozzle and hose line of the intelligence team;
- ✓ when finding a water source at a considerable distance.

Thus, the pump water tender squad is the most mobile fire and rescue unit, which in extreme conditions on fire can immediately introduce extinguishing agents to extinguish fires and perform other operational tasks in several squads on special and auxiliary fire trucks depending on the necessity and characteristics of extinguishing fires in area or objects.

Proceeding from the specific features of the professional activity of the staff of the primary tactical fire and rescue unit of the SES of Ukraine during fire extinguishing, liquidation of the consequences of the accident, we will analyze the psychological aspects of the operational work of the fire-rescuers.

Conditionally in the operational activities of fire-rescuers you can distinguish three stages:

- 1) preparatory;
- 2) implementation of the operational task;
- 3) final.

The preparatory stage covers the period of action of the staff of the primary tactical fire and rescue units from the moment of receipt of the notification of a fire, an accident before their arrival at the scene.

This stage includes the announcement of the signal "Alarm", the collection of staff of the duty guard on the signal "Alarm", the arrival to the place of fire, an accident and operational deployment, that is, bringing forces and resources to the state of readiness to perform operational tasks.

An alarm can be obtained by the personnel of the duty guard at any time of everyday activities. As a rule, the signal sounds unexpectedly and causes a sharp increase in the emotional tension of waiting and its transition to the voltage of the unknown. However, this does not prevent fire-rescuers from quickly equipping, taking a seat in the cabin of operational calculation and arriving at the scene as quickly as possible.

During the drive on the fire, the nervous-psychic tension increases, this is due to the unknown actions of the future. This may lead to the fears of some staffers, and then to their fear.

Experienced staffers say that during a fire, an accident, fire brigade mentally plan their future actions based on available information and practical experience. This contributes to reducing the tension of the unknown and the formation of mood for practical work. Thus, the specific features of this stage of operative activity are the severe shortage of time and the uncertainty of the situation caused by the lack of information about the event.

Upon arrival at the place of fire, intelligence and operative deployment are carried out. In these circumstances from firefighters require attention and a special professional sense, a high level of operational thinking, orientation and resistance to negative emotional influences.

The stage of implementation of the operational task covers the period from the beginning of specific actions aimed at extinguishing a fire or eliminating the consequences of the accident, until its full implementation. A specific feature of this stage is the presence of a large number of stress factors, which cause a state of pronounced neuro-psychological stress and negative psychic reactions and contribute to the emergence of fear and panic.

The specifics of operative work lies in the fact that the situation in a place of fire, complicated by smoke, high temperature, dangerous factors for the life and health of staff. A special danger is the fire. During the execution of the operational task, various difficulties and obstacles arise.

Thus, for firefighters, the greatest danger of poisoning is, first of all, CO, CO₂, hydrogen chloride, hydrogen chloride, nitrogen oxides, etc.

In the fire zone, there is a high density of smoke which limiting visibility and complicating the actions of the staff.

The extinguishing of fires occurs, as a rule, at high ambient temperatures and high humidity. Tense physical work in these conditions causes a violation of the water-salt balance, the body's thermoregulation, accompanied by a deterioration of state of health, headache, reluctance to move, retardation of the reaction.

When carrying out operative work, firefighters-rescuers are exposed to heat fluxes of high power, open flames, sparks. As a result, skin burns are possible. When extinguishing fires, eliminating accidents at nuclear power plants, the most difficult factor is the ability to influence various radiation doses on the body of the fire-rescuer.

Dangerous factors include the presence on the site of a fire of various electrical installations. The need to supply water (foam) to extinguish a fire in the absence of complete safeguards on the removal of electrical voltage often causes the need to take risks, which in some cases leads to a electric shock. Similarly, the situation with the presence on the site of a fire of technological installations under excessive pressure develops. Such installations in the conditions of a fire lose their mechanical strength and explode, which can also lead to injuries and death of staff.

Naturally, the influence of harmful and dangerous factors varies depending on the specific situation of fire or of the accident. The ratio of operating time in the air or in a closed room in the fire-rescue department is not regulated and unplanned, the microclimatic parameters of the environment during one working shift change depend on the conditions and situations where the work takes place.

In addition, firefighters have to take into account changes in the situation, refine the decisions previously taken, modify the ways of action. Possible danger, the fastest pace of work and the desire to effectively perform operative tasks cause from fire-rescuers a special emotional state, which significantly influences the working tone of their organism. This condition either increases or decreases performance.

The final stage of the implementation of the operative task by the primary tactical fire and rescue units cover the period of time after the fire or the consequences of the accident. At this stage, the condition of firefighters in many respects depends on the outcome, the success of the implementation of operational tasks, as well as on the duration of operative operations and the intensity of work.

Success and failure in the execution of operational tasks are equally perceived by all the participants. Firefighters seek to assess their actions and comrades.

At this time, measures are being taken to restore operational readiness of the unit, inspect equipment, etc.

Later, managers (department chief, guards, squads) conduct a fire extinguishing or liquidation of the accident, determine the reasons for the success or failure of the unit, individual employees. It should be noted that it is expedient to conduct such a analysis after some time after the end of operational work so that in a more calm mental state, staffers could objectively assess their actions.

It is also necessary to take into account the fact that, when successful, some people feel like joy and desire to consolidate their success, others calm down and begin to think that now they do not need to exert any effort in the process of day-to-day teaching and service and that they will continue to be able to work well.

The unsuccessful implementation of operational tasks also has a different effect on the combat capability of firefighters: some mobilize forces for further work, while others are so much worried that they lose their operational readiness. Sometimes they try to explain the failure by objective reasons or to shift the blame to their comrades. It is extremely important for those conducting an analysis of the operational task. Understand the particulars of his subordinates and carried out measures to raise the fighting spirit of the personnel of the unit [6; 9].

Conclusions and prospects of research. The professional activity of the staff of the primary tactical fire and rescue unit of the SES of Ukraine imposes high and specific requirements to the psyches of the firefighters. This is manifested in the need for high mental resistance to adverse external and internal influences, determination, endurance and self-control, perseverance and resilience of each firefighter-rescuer, psychological compatibility and cohesiveness of fire brigade.

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