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DESIGN OF SPECIAL CLOTHES FOR AMBULANCE PERSONNEL

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Abstract

This article discusses the design of special clothing for emergency medical personnel. During the study, the functional, ergonomic, hygienic and protective properties of clothing were analyzed, and their importance for the activities of personnel serving in emergency situations was shown. It was shown that the correct design of special clothing serves to increase the safety and labor efficiency of personnel.

Keywords

emergency medical care, special clothing, ergonomics, protective properties, functionality, design, emergency care, physical activity.

Emergency medical personnel are specialists who perform the most responsible and dangerous work in society. They provide services in various emergency situations, including traffic accidents, natural disasters and acute illnesses. In such conditions, the clothing of personnel is important not only for appearance, but also as a means of safety, comfort and protection. Therefore, the design of special clothing for emergency medical personnel is one of the urgent issues.

Today, the role of emergency medical personnel in the healthcare system is incomparable. They play an important role in protecting public health and providing prompt and effective assistance in emergency situations that pose a threat to human life. Ambulance workers often work in complex, dangerous and uncomfortable working conditions. Ensuring their health and occupational safety in such conditions is one of the urgent issues.

The work process of ambulance workers is characterized by a high level of physical activity, constant movement, exposure to various weather conditions and biological, mechanical and psychological factors. In the process of providing services in emergency situations, employees are exposed to various infectious hazards, humidity, cold or hot environments, as well as risks associated with traffic. Therefore, their work clothes should not be ordinary medical uniforms, but should have special protective and functional properties.

Special clothing serves as an important means of protection in the work of ambulance workers. Such clothing serves to protect the employee from the effects of the external environment, ensure ease of movement and increase work efficiency. At the same time, special clothing is also important in forming the professional image of employees, making them quickly recognizable among the public.

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In recent years, special attention has been paid to ergonomics, hygiene and design issues in the design of special clothing. The use of modern technologies and new types of fabrics has expanded the possibilities of creating more comfortable, durable and safe special clothing for employees. In this regard, it is urgent to study and improve the design of special clothing for emergency medical personnel on a scientific basis.

The purpose of this article is to identify the main requirements for the design of special clothing for emergency medical personnel, analyze their functional, ergonomic and protective properties, and develop practical recommendations.

LITERATURE ANALYSIS AND METHODOLOGY: Scientific sources indicate the need to design special clothing for medical personnel based on hygienic requirements. In particular, air permeability, moisture absorption and antibacterial properties are noted as important factors for special clothing. In some studies, the use of multilayer materials that protect against biological fluids has been proposed as an effective solution.

Foreign literature places special emphasis on the safety aspects of special clothing for emergency medical personnel. Researchers have scientifically proven that reflective elements, bright colors, and design solutions that increase visibility reduce the risk of workers being involved in traffic. It is also noted that ergonomic design reduces the level of fatigue of workers and increases labor productivity.

Emergency medical personnel often work at night and in adverse weather conditions. Therefore, the use of bright colors and reflective elements in special clothing increases safety. This factor ensures the visibility of workers during traffic and in emergency situations.



Figure 1. The importance of aesthetic requirements

These requirements have a positive effect on the morale of employees and increase confidence in medical services.

At the next stage, the working conditions of emergency medical personnel were analyzed and the main problems they face in their daily activities were identified (Figure 1). Ergonomic requirements were determined, taking into account the activity of employees, the duration of working hours and environmental factors. The study also used constructive and design methods. Using these methods, the design solutions, material selection and design elements of special clothing were justified. The results obtained were summarized and practical recommendations

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were developed for the design of comfortable and safe special clothing for emergency medical personnel.

DISCUSSION AND RESULTS: The results of the study showed that the existing models for designing special clothing for emergency medical personnel are not sufficiently perfect in practical terms. The current special clothing often performs only the function of external protection and does not fully meet the real needs of employees in the daily work process. This is especially evident in emergency situations where rapid action is required.

As a result of the analysis, it was found that the design solutions of special clothing are often based on standard templates and do not sufficiently take into account the high level of mobility inherent in the activities of emergency medical personnel. As a result, some parts of the clothing may restrict movement or cause discomfort during work. This problem indicates the need to strengthen the ergonomic approach.

During the discussion, special attention was paid to the issue of material selection.

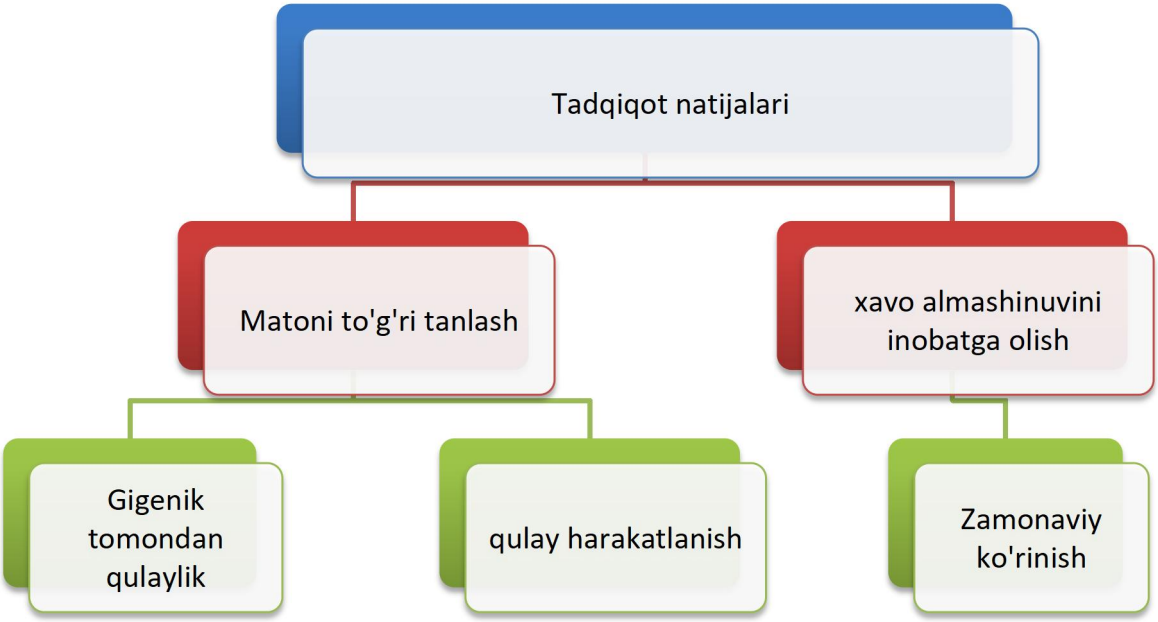

Figure 2. Requirements for the use of special clothing

At the same time, the use of multifunctional fabrics produced on the basis of modern technologies can significantly reduce these problems. The results of the analysis showed that design and visual elements are also of practical importance. The incorrect selection of colors and marking systems in special clothing makes it difficult to identify employees in emergency situations. During the discussion, the insufficient use of light-reflecting elements and contrasting colors was assessed as a factor that reduces the level of safety.

The results of the study also showed that aesthetic and psychological factors are not sufficiently taken into account when designing special clothing. Clothes that are comfortable and look modern for employees can have a positive effect on their attitude to work. In this regard, it was discussed that the design of special clothing has not only technical, but also socio-psychological significance.

In general, the results obtained indicate the need to reconsider existing approaches to the design of special clothing for emergency medical personnel. The conclusions developed based on the results confirm the need to thoroughly consider the real working conditions, safety requirements and ergonomic needs of employees when designing special clothing.

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CONCLUSION: The results of this study showed that the issue of designing special clothing for ambulance workers requires a multifaceted and comprehensive approach. Studies have confirmed that the current special clothing does not fully cover the real working conditions and characteristics of the employees and needs to be improved ergonomically and functionally.

During the study, it was determined that when designing special clothing, it is necessary to take into account not only protective properties, but also freedom of movement, comfort, hygienic requirements and psychological factors. It was proven that the correct selection of materials and justification of constructive solutions reduces the level of employee fatigue, increases labor productivity and ensures the effectiveness of service in emergency situations.

The importance of design and visual elements was also determined, and the role of reflective parts and color combinations in increasing safety was substantiated. It was noted that the modernity and aesthetic perfection of special clothing have a positive effect on the professional activities of employees and serve to improve the image of the medical service.

In conclusion, it can be said that when designing special clothing for emergency medical personnel, it is necessary to use a scientifically based approach that combines ergonomics, functionality, protection and aesthetic requirements. The results of the study can serve as a methodological basis for the development and implementation of special clothing in the future.

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