

LIFE SAFETY IN THE HOUSEHOLD AND SOCIAL SPHERES

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ABSTRACT

The issue of ensuring the safety of life is becoming more and more urgent. Society is beginning to understand that the further development of mankind and technological progress require that everyone has the highest level of knowledge and culture in this field. The purpose of the presented research is to study the safety of life and to consider the safety of life in the household and social spheres. The methodological basis of the research is based on a combination of various general scientific methods of scientific cognition. This study used methods of information analysis and synthesis, the comparative method, and the method of induction and deduction. At the final stage of the study, the method of analysing scientific literature relevant to the subject of the study was used. Life safety (LS) can be characterised as a science that studies hazards and ways to protect against them. It is an integral part of the system of state, social and defense measures taken to protect the population and economy of the country from the consequences of accidents, disasters, natural disasters and weapons of destruction of the enemy. In the course of the study, it was determined that social practice indicates that a person violates the rules of safe behavior for several reasons. First of all, this is explained by ignorance of the object of influence, the rules of safe behavior and ways of their application, the discrepancy between the physical and mental capabilities of a person to the requirements of public practice. The practical value of the presented research lies in the fact that it can be used by both theorists and practitioners in the process of studying the safety of human life in the household and social spheres.



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1. INTRODUCTION

The issue of ensuring the safety of life is becoming more and more urgent. Society is beginning to understand that the further development of mankind and

scientific and technological progress presuppose that everyone has the highest level of knowledge and culture in this area. Gradually, there is a need to organise targeted continuous training of citizens on the basics of safe behavior to reduce the negative impact of the so-

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called human factor in all spheres of life (Akhmadiyeva and Minnikhanov, 2015).

Currently, society is in the process of forming a culture of safety in life. Today, this field of activity covers a wide range of people and different sectors of the economy. The practice of analysing and statistical data of operational reports of the Ministry of Emergency Situations and other ministries shows that the number of people killed as a result of fires, material damage and, in general, human and natural emergencies is decreasing (Sexton et al., 2016). However, from time to time there are discrepancies between the production potential and the constant growth of social needs, which become more complicated from year to year. For example, the planning of large cities leads to the destruction and degradation of natural ecosystems. The creation of new sectors, intensive technological renewal of the basic sectors of the economy, and an increase in the number of enterprises require an adequate system of protection against man-made disasters of any origin (Syropoulos, 2020). Life safety (LS) can be characterised as a science that studies hazards and ways to protect against them. It is an integral part of the system of state, social and defense measures taken to protect the population and economy of the country from the consequences of accidents, disasters, natural disasters and weapons of destruction of the enemy. The main goal of the Belarusian Railways as a science is to protect people in the technosphere from negative dangers (impacts) of anthropogenic and natural origin, achieving comfortable or safe living conditions (Shershneva et al., 2019).

The impact of man-made risks disrupts people's daily lives, causes accidents leading to emergencies and catastrophes, including environmental ones. Currently, there is an alarming trend of increasing the destructive impact of natural hazards and processes. Despite all the specifics of situations in specific countries and regions, they are determined by population growth, the concentration of population and material values in relatively limited territories, and the changing nature of the genesis of natural disasters (Zagrebin, 2017). By invading nature and creating ever stronger engineering complexes, humanity is creating a new, extremely complex system, including the technosphere, the patterns of development of which are still unknown. This leads to increased uncertainty in the functioning of the technosphere, the entropy of its processes, the danger of man-made disasters, large-scale accidents in industry, energy, transport, pollution of the biosphere with highly toxic and radioactive waste, which threatens human health (Kristowski et al., 2018). The tasks of the LS as a science include: identification of hazards, recognition and quantification of negative impacts on the environment; prevention of human exposure to certain negative factors; protection from danger; elimination of negative consequences of exposure to dangerous and harmful factors; creation of a normal, that is, a comfortable state of the human environment.

Human security in a broader sense is a state of complete physical, social and spiritual well-being determined by internal (heredity, physical and mental health) and external (natural, anthropogenic, technogenic, social environment) factors (Sexton et al., 2016).

It is almost impossible to avoid most natural situations. However, there are a number of dangerous natural phenomena and processes that can prevent negative development. This can be achieved by taking measures to prevent hail, premature avalanches and spills of mud lakes formed by blockages of mountain rivers. Measures to prevent such situations may also include localisation or suppression of natural sites of infection, vaccination of the population and livestock (Kristowski et al., 2018). The organisation of security in various spheres of socio-economic development of the state needs qualitative development of aspects of pedagogical activity. This work will create such a concept as the "paradigm of life safety". Only in this way, or even better, a step forward, can the safe life of the country's citizens be ensured (Sexton et al., 2016).

The purpose of the presented research is to study the safety of life and to consider the safety of life in the household and social spheres.

2. MATERIALS AND METHODS

The methodological basis of the research is based on a combination of various general scientific methods of scientific cognition. This study used methods of information analysis and synthesis, the comparative method, and the method of induction and deduction. At the final stage of the study, the method of analysing scientific literature relevant to the subject of the study was used. The method of information synthesis was used in the study. Synthesis is the process of joining or combining previously disparate things or concepts into one whole or set. Synthesis is also a method of combining the whole from functional parts, unlike the analytical method, this method involves dividing the whole into functional parts. The study also used the method of information analysis. Analysis is the process of dividing a complex topic or object into smaller parts to gain a broader understanding of the presented topic or object. Using the methods of analysis and synthesis of information, it was considered what the social sphere includes. It was determined that the social sphere includes: educational and educational institutions, medical institutions, cultural institutions, sports institutions, institutions that provide social services, catering establishments, organisations that provide utilities, passenger transport, and institutions that provide communication services.

Comparison can be characterised as a logical technique necessary in any cognitive activity: at different stages and at different levels, regardless of the subject. Comparison can be used as a special research method only if the comparison procedure requires special

training and special organisation. Such a need usually arises when comparing complex objects and phenomena that are characterised by a large set of very different characteristics. The experience of comparative law shows that based on the comparative method, it is possible to solve not only scientific and educational, but also important applied tasks. The methods of induction and deduction were also used in the study. The inductive method is a method of research and presentation in which there is a transition from the observed concrete facts to the allocation of principles, general provisions of the theory and the definition of patterns. Deduction is a method of thinking, the result of which is a logical conclusion, the truth of which is guaranteed by the truth of the assumption. With the help of induction and deduction methods, it was determined that the impact of man-made risks disrupts people's daily lives, causes accidents leading to emergencies and catastrophes, including environmental ones.

At the final stage, an analysis of the scientific literature was carried out. The analysis of scientific literature is an accessible research method, but also the most demanding. This method requires certain skills of working with literature: the ability to take notes, group

material in accordance with the work plan. The main purpose of analysing literary sources is to collect scientific data on the topic under study, consider the prospects of research and formulate a working hypothesis. When analysing literary sources, various works of researchers were considered. In the process of analysing literary sources, the studies of scientists from different countries were considered. All the studies considered were aimed at studying the problem of human life safety.

3. RESULTS

In the course of his life, a person constantly faces dangers and extraordinary events, very diverse and related to natural, man-made, environmental, social and other phenomena and processes. The social sphere is a set of industries, enterprises, organisations that are directly related and determine the way and standard of living of people, their well-being. The social sphere covers the entire sphere of human life, from the conditions of his work and life, health and recreation to social, class and national relations (Kristowskiet al., 2018). Figure 1 shows what the social sphere includes.

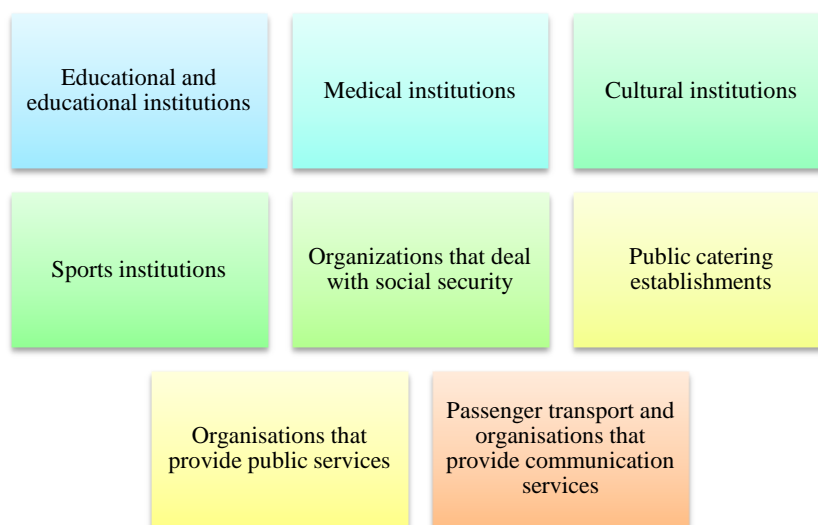


Figure 1. Social sphere of life

Thanks to numerous organisations, the social sphere of public life thus provides people with working and leisure conditions, takes care of physical development, health and education. Everyday life is an unproductive, unprofessional sphere of human activity. This can also be called a way of life. The process of satisfying a person's material and spiritual needs characterises the way of life, satisfaction of needs leads to new needs, thereby outlining the development of the next human life, and consequently, the way of life (Skripnuket al., 2019). The household sphere prepares a person for social activity. This creates a special type of social relationship. Social and household relations create relations between people for the production and consumption of public goods. For society, the

household sphere is the definition of the level and properties of the life of individuals. This also determines the social stratification in society, so the household sphere of life is closely related to the property stratification of society. The practice of dangerous and emerging emergencies shows that up to 85% of all cases of their occurrence are related to human activity and arise for social reasons (Kristowskiet al., 2018).

Dangers, extreme and emergency situations are very diverse. They can be caused by natural disasters that cause natural disasters; environmental, related to imbalances in human activity and the environment; man-made accidents resulting from accidents and

catastrophes in the industrial sector, transport, communication systems; social, related to public disputes and others. These extremely dangerous phenomena and processes are directed at society, that is, at specific people, public and state structures and the environment (natural, industrial, social, etc.), outside of which society simply cannot exist. Conditioned upon this, they need not only to know, be able to identify, anticipate, but also to protect themselves from them, that is, to prevent, localise, neutralise, stop and, if necessary, eliminate (Skripnuket al., 2019).

In the social sphere, a dangerous situation, as in other spheres of life, a real event, a process that can harm people, society and the state is possible, including their well-being, destroy natural, material and spiritual things. A social threat is always meaningful, filled with specific content, and in the case of a clearly formulated dangerous situation, it often acquires a certain legal characteristic, which is often fixed in regulatory legal acts (Bolbocean and Tylavsky, 2021). Protection from social threats is the most important function of state and public structures. It consists primarily of preventive measures aimed at eliminating these dangers. In addition, it is necessary to properly train a person who can adequately act in dangerous situations: psychological, informational, legal, security, etc. In the process of training, it is necessary to adopt behavioral models that consider specific situations (Sokolovet al., 2018). Social emergencies can be characterised as limited situations in a confined space, which are the result of dangerous conflicts and conflicts in social relations, which may or may not lead to human casualties, harm to human health or the environment, significant material losses or destruction (Akhmadieva, 2015).

The basis for the emergence and development of social emergencies is the violation for various reasons of the balance of social relations, for example, economic, political, interethnic, as well as religious. These circumstances can be provoked by various factors causing social tension. Such factors include unemployment, corruption, crime, riots, terrorist acts, government crises, inflation, food problems, social unrest, domestic nationalism, locality and others. The long-term influence of these factors on chronic physiological and mental fatigue of people, severe extreme conditions such as depression, suicide, etc. (Kristowskiet al., 2018).

There are a lot of social dangers. These include various forms of violence, including legalised (wars, armed conflicts, terrorist acts, riots, repression), crimes (banditry, theft, fraud), substance abuse (alcohol, drugs, medicines, cigarettes), suicide and much more that can harm human health and life (Akhmadieva, 2015). A special place in human security is occupied by such social factors as the level of well-being, general culture, service culture, living conditions, habits, moral and

emotional characteristics. The socio-political environment is of great importance for its security, namely, the state and its institutions (legislative, executive and judicial authorities, self-government bodies, public administration bodies, ministries), public structures (political parties and organisations), trade unions, public organisations, family, citizens. All their actions must comply with the current legislation and be based on a balance of interests of the individual, society and the state, and their mutual responsibility for security (Sokolovet al., 2018).

One of the most important aspects is ensuring the safety of people from crimes (premeditated murder, violence, interference with the health and dignity of the individual, robbery and theft of personal property and documents, physical and psychological terror) related to threats, intimidation, extortion and other forms of human exploitation, influence, including informational and psychological (use of mass media) and psychophysiological (hypnosis, psychotropic drugs) (Skripnuket al., 2019). Social practice shows that a person violates the rules of safe behavior for several reasons. This is explained by the ignorance of the object of influence, the rules of safe behavior and ways of their application, the discrepancy between the physical and mental capabilities of a person to the requirements of public practice. Such disorders can also be permanent (lack of coordination, insufficient concentration of attention, non-compliance with social requirements) and temporary (fatigue, deterioration of health, disability, depression, stress, intoxication) (Akhmadieva, 2015). These causes cause danger and threats. Preventive measures in the first case include advertising (propaganda) of safety rules and training people based on them; in the second, training and practicing safe behavior skills; in the third, social control, professional selection, medical examination. Experience shows that a person and a social environment is a complex interaction of a person with different components of his social environment. To ensure their mutual security, it is necessary to prevent hazards and threats and prepare all elements of the system for action in dangerous situations (Kristowskiet al., 2018).

4. DISCUSSION

For a more extensive consideration of the concept of "life safety" and the study of life safety in the household and social spheres, it is necessary to consider the research of other authors. The article of S.N. Krivorotenko (2019) is devoted to the theoretical and organisational and managerial aspects of human interaction with the environment, protection of the environment and society from the negative effects of various hazards (natural, man-made and social origin), which allows developing effective measures to eliminate their causes, creating living conditions in the "Human Environment" system. The concept presented in Krivorotenko's research is intended to generalise and

use various methods and tools to ensure the safety of life and environmental protection necessary for human functioning in various environments: domestic, industrial and non-industrial, living and inanimate nature, emergency situations and other environments, and contributes to the development of the idea of the inseparable unity of effective professional activity, social interaction, harmonious spiritual and physical development.

The article of D.V. Smirnov (2017) presents the results of a study of didactic support for the development of functional literacy of schoolchildren in modern conditions on the thematic component of safe life. Analysis of contradictions in the development of functional literacy in the field of safe living and health in modern conditions: family and social institutions. The author identified the essence of the formation of functional literacy as the corresponding minimum content of education, its core in the field of a safe and healthy lifestyle. The procedural specificity of the leading type of activity is shown, the content and form of which depends on the specific historical conditions of the child's development. Based on the results of research and experimental activities, the author considers a typical situation when the knowledge and skills of safe behaviour of students and adults violate the basic rules of safety and health. The possibilities of creating behavioural models that ensure unconditional compliance with safety in the social and natural environment when implementing a system-activity approach are presented. The necessity of creating an informal socio-cultural environment for teaching and educating the younger generation based on the method of trial and error in various types of activities, obtaining social experience in socio-professional exams is substantiated.

The article of E.I. Zagrebina (2017) examines the relevance of the problem of complex security in the context of the combined action of various types of threats and dangers, including one of its components, namely, the security culture. The author considered the organisation of the discipline "Safety of life" and its content, considering the complexity of the presentation. An example of a practical task in which it is necessary to apply knowledge to ensure comprehensive human security. The author has formed a unified competence for bachelor's degree programs as a result of mastering this discipline.

N.V. Grizodub (2021) notes that the discipline "Life safety" is mandatory for university students. Considering the security situation in the world and in some countries and regions, an increase in injuries and a decrease in the general health of the population. The author substantiates the role and importance of the discipline "Life safety" in universities by the example of studying the topic "Health and biological foundations of safety". Since it is the biological hazards that arise in the

modern world under the influence of environmental factors that require careful consideration to ensure a safe human life in various fields: educational, social, professional and others. the health of students as the most mobile stratum of society conditioned upon the development of a safe culture of life, a model of safe behaviour in society and in future professional activity. Whether it is a separate building or a campus in a university, corporation or medical complex, there is a general requirement when it comes to shock absorbers that ensure the safety of life. This general requirement is proper installation, operation and maintenance, which is confirmed by the necessary checks and tests from the beginning to the end of the service life of the safety valve. When it comes to life safety dampers, the responsibility for installation, operation and maintenance is a reality that should be discussed in detail. Besides the fact that proper installation, inspection, testing and maintenance of dampers to ensure the safety of life is mandatory, this is a good business opportunity for many engineering firms or service contractors (Liescheidt, 2018).

The article by M.H. Faber, J.D. Sorensen, T.A.C.W.M. Vrouwenfelder (2015) considers the question of choosing the right metric of risks related to life safety and health in the context of regulation, considering the effects of temporal and spatial scales for their consistent quantification and comparison between social sectors, industries and areas of application. The starting point is a summary of what is considered to be the basis for modern best practices in regulating life safety and health risks. After that, based on selected main examples from various fields of application, inconsistencies in the existing quantitative risk assessment of best practices in the context of regulation are identified and discussed. It is identified and explained that the principle of optimising solutions and the joint implementation of the principle of ultimate life saving does not make it relevant to assess individual life safety risks for specific people. The obtained absolute level of individual risk to the safety of life is also not subject to an assessment of acceptability. The authors emphasise that the main reason for the inconsistency of quantitative assessments and comparisons of risks stems from the fact that the current regulations partly relate to public activities, and partly to applied technologies; in some cases they consider the standpoint of individuals, and in others the effectiveness of the technologies used. In addition, the authors have shown that the commonly used averaging of individual risks over time and space can lead to unintentional masking of ineffective actions and applied technologies. Finally, the authors propose how it is possible to consistently and uniformly assess and compare the individual risk to life safety for different types of activities and technologies used.

R.S. Akhmedieva, R.N. Minnikhanov (2016) note that the study of the problem of life safety is important because it is necessary to develop each person's ability

to identify and prevent hazards, and to ensure personal safety on the road. Thus, this article is devoted to the disclosure of the structural and substantive components of the management of the life safety system on the roads. The main approach in the study of R.S. Akhmadieva, R.N. Minnikhanov (2016) has become an integrated approach that allows us considering the safety of personal life on the road as a purposeful system capable of self-organisation and self-management for the safe behavior of participants in road transport relations. The article covers the essence of life safety on the road, the authors presented their components as an integrative system. The authors have identified subjective factors affecting the safety of life on the road (the duration and periods of change of road signals; the expected time of passage of a certain section of the path), mental states and individual characteristics of a person (health and mood); age characteristics; the level of theoretical and practical skills of a road user. The article also identified the structure of the educational road environment for children. The authors identified the peculiarities of their upbringing (Akhmadieva and Minnikhanov, 2016).

N. Uchida et al. (2018) notes that although life safety information systems on smartphones are widely used for disaster emergencies, there have been some problems with their use by people who do not know how to work or are injured. Thus, the study of N. Uchida et al.(2018) offers methods for detecting static bodily objects using a delay-resistant network for a life safety information system. In the system, sensors on smartphones automatically detect abnormal static situations based on the difference in time and position based on Monte Carlo methods with a Markov chain, and emerging messages are automatically transmitted with message priorities. Moreover, these messages are transmitted to servers with a network resistant to delays. Then a prototype of the system is introduced and experiments on evaluating the effectiveness of the proposed systems are discussed.

M.-O. Chae's research (2014) is a study of the ways in which the key conditions of anxiety, impulsivity, scholarship of life safety practices, attitudes to life safety practices, interpersonal assistance and self-efficacy from the modification of maintaining Pender's health affect the practice of behaviour that ensures life safety in school-age children. The author notes that the sample included 489 pupils of grades 5 and 6 from five elementary schools in Seoul and four provinces of South Korea. The materials were analysed using schematic statistics, correlations, factor analysis and modeling of structural equations. The attitude to the practice of providing life security, interpersonal support, self-efficacy and impulsivity directly affected the practice of behavior providing life security. M.-O. Chae (2014) notes that anxiety did not have a direct impact on the practice of safe behaviour, but indirectly affected it. In this modified model, 52.0% of the practice of safe

behavior was explained by the main factors. In conclusion, the author noted that it is necessary to simplify the practice of behaviour related to the safety of life in late childhood. The author notes that it is necessary to develop a positive attitude to the safety of life, and to reduce impulsivity and increase self-efficacy (Chae, 2014).

O.A. Leshchynska, V.M. Firman, V.M. Marych, Y.V. Ilchyshyn, Y.B. Velykyi (2021) note that one of the most important aspects of life safety is the use of appropriate means and measures to create and maintain healthy and safe living conditions and human activities both in everyday life and during emergencies. The human factor as a factor of life safety can be the main source of danger. A person's readiness for responsible constructive behavior is formed conditioned upon the influence of the organisational culture of the enterprise, and the information space. The authors sought to explore the role of moral attitudes of young people and their readiness for constructive social interaction. Research by O.A. Leshchynska, V.M. Firman, V.M. Marych, Y.V. Ilchyshyn, Y.B. Velykyi (2021) was held in the 2019-2020 academic year on the basis of Lviv Polytechnic National University. A total of 570 respondents took part in the survey. The survey was conducted. Factor analysis revealed six factors. The authors found that the majority of students have consumer, authoritarian and destructive ideas, so their reactions to the actions of life safety specialists on the introduction of occupational safety technologies are reduced to formal observation (Leshchynska et al., 2021).

R.Sh. Akhmadieva et al. (2019) substantiated a noxological approach to determining mechanisms to counteract the risks of modern hazards. The key ideas of the noxological approach in the framework of their research are environmental protection and human life safety. Their research is based on methodological principles and leading ideas of environmental protection and human life safety, presented in the context of social ecology, the concept of sustainable development of environmental safety, in the ecological paradigm, in the coevolutionary paradigm, in environmental ethics. The authors have attempted to create a theoretical model of a noxological approach to countering the risks of modern hazards in the field of environmental protection and human life safety. The systematisation of the basic concepts of the noxological approach as an independent scientific direction is carried out; the regularities and sources of hazards are established; the taxonomy of hazards is determined; the prototype of the hazard passport is substantiated. The authors note that their research can be used for universities, teachers and students. The study comprehensively and fully presents a model of the noxological approach to environmental protection and human life safety: the risks of modern hazards (Akhmadieva et al., 2019). Therefore, the safety of life has a social orientation, since it is connected with

ensuring the protection of society from dangers, including from itself. At the same time, it has a social aspect associated with the danger that spreads in society and threatens people's lives and health.

5. CONCLUSIONS

It was determined that the society is currently in the process of forming a culture of safety in life. It is important to note that today this field of activity covers a wide range of people and different sectors of the economy. Life safety can be characterised as a science that studies hazards and ways to protect against them. It is an integral part of the system of state, social and defense measures taken to protect the population and economy of the country from the consequences of accidents, disasters, natural disasters and weapons of destruction of the enemy.

The impact of man-made risks disrupts people's daily lives, causes accidents leading to emergencies and catastrophes, including environmental ones. Currently, there is an alarming trend of increasing the destructive impact of natural hazards and processes. In the course of the study, it was determined that social practice indicates that a person violates the rules of safe behavior

for several reasons. This is explained by the ignorance of the object of influence, the rules of safe behavior and ways of their application, the discrepancy between the physical and mental capabilities of a person to the requirements of public practice. The basis for the emergence and development of social emergencies is the violation for various reasons of the balance of social relations, for example, economic, political, interethnic, as well as religious. These circumstances can be provoked by various factors causing social tension. It was determined that the tasks of the Belarusian Railways as a science include: identification of hazards, recognition and quantification of negative impacts on the environment; prevention of human exposure to certain negative factors; protection from danger; elimination of negative consequences of exposure to dangerous and harmful factors; creation of a normal, that is, a comfortable state of the human environment.

It is important to summarise that the safety of life is one of the most important aspects of human life. A large number of researchers from different countries of the world are engaged in the study of LS. In the course of the presented study, the safety of life in the social and household spheres was considered. However, it is important to note that there is still a need to consider and study LS in other areas of human life.

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