

# NEGATIVE FACTORS OF MANAGEMENT ACTIVITIES OF THE SECURITY AND DEFENCE SECTOR REPRESENTATIVES AND DIRECTIONS OF THEIR OVERCOMING

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**Ivan M. Okhrimenko<sup>1</sup>, Nina V. Lyhun<sup>1</sup>, Viktoriia P. Pryimak<sup>2</sup>, Yaroslav I. Korol<sup>3</sup>, Mykhailo S. Myroshnychenko<sup>4</sup>**<sup>1</sup>NATIONAL ACADEMY OF INTERNAL AFFAIRS, KYIV, UKRAINE<sup>2</sup>KYIV FACULTY OF THE NATIONAL ACADEMY OF THE NATIONAL GUARD OF UKRAINE, KYIV, UKRAINE<sup>3</sup>ODESA MILITARY ACADEMY, ODESA, UKRAINE<sup>4</sup>KHARKIV NATIONAL MEDICAL UNIVERSITY, KHARKIV, UKRAINE

## ABSTRACT

**The aim** is to substantiate the expediency of performing physical exercises by representatives of the security and defence sector to reduce the negative impact of management activities factors on their state of health.

**Materials and methods:** The peculiarities of professional activities of 82 officers of the National Police and the Armed Forces of Ukraine, who had military and special ranks of "lieutenant colonel", "colonel" and held senior positions (heads of faculties, departments, divisions, services and other units) were studied. Research methods: theoretical analysis and generalization of literature sources, pedagogical observation, interviews, questionnaires.

**Results:** It was found that management activities are characterized by a number of negative factors, which negatively affect the body of management level officers. With systematic interference, they significantly worsen the state of officers' health and negatively affect the effectiveness of their management activities.

**Conclusions:** Physical education has significant potential in improving the efficiency of professional activities of management level officers, strengthening their health and enhancing working ability. The direction of improving physical training of management level personnel is determined as increasing the amount of general physical training, conducting classes with different orientations taking into account the age group, service load and training within the working time pattern.

**KEY WORDS:** negative factors, management activities, physical education, health

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## INTRODUCTION

In recent years, there has been a tendency towards reduction of the level of physical fitness and health of the population of Ukraine. Representatives of the security and defence sector i. e. servicemen and police officers are not an exception. This is especially true for management level, whose professional activities are characterized by a significant reduction in physical exercises, high intellectual loads, stresses, responsibility for decision-making and more.

The works [1-5] point out a deterioration of the state of health and the level of physical fitness of the male population of Ukraine in recent years under conditions of social, economic and political instability: the rate of depopulation in Ukraine ranks the 2<sup>nd</sup> place in the world, the 1-2<sup>nd</sup> place in Europe for mortality from cardiovascular diseases; the average life expectancy of men in Ukraine is 10-12 years lower than in the European Union countries; more than 70 % of the adult male population have low and below average levels of physical health. The probability of death of working age men is 38.4 %, which is one of the worst indicators among the civilized countries of the world. More

than 80 % of fatalities in middle-aged and elderly people at the present time account for hypertension, atherosclerosis, and obesity.

Modern management activities of the security and defence sector representatives take place under specific conditions associated with significant psychological load, constant growth of information, high level of responsibility for decisions, overload of the intellectual sphere, high nervous and emotional stress, long-term limitation of motor performance and preservation of static postures. These factors lead to a decrease in mental and physical performance, deterioration of the body's major systems (especially cardio-respiratory), the appearance of excess weight, and with systematic action can worsen health and cause various diseases (hypertension, coronary heart disease, etc.) [6-8].

According to many scientists [9-11] physical education is one of the ways to overcome the negative impact of adverse factors of professional, including management activities. Physical education is designed to increase the level of physical fitness, improve physical development and functional capabilities of servicemen and police officers, strengthen their health, improve psycho-emo-

tional state, enhance working ability, expand professional performance, provide a range of recreational and rehabilitation activities.

## THE AIM

The aim of this study is to substantiate the expediency of performing physical exercises by representatives of the security and defence sector to reduce the negative impact of management activities factors on their state of health.

## MATERIALS AND METHODS

The research was conducted at the National Academy of Internal Affairs (Kyiv, Ukraine) and the Military Academy (Odessa, Ukraine) in 2016-2020. The peculiarities of professional activities of 82 officers of the National Police and the Armed Forces of Ukraine, who had military and special ranks of "lieutenant colonel", "colonel" and held senior positions (heads of faculties, departments, divisions, services and other units) were studied.

Research methods: theoretical methods included the analysis and generalization of literature sources, comparison was used to investigate the theoretical foundations of the problem, pedagogical experience of physical education implementation in the process of professional activities of specialists to improve their health, working ability, longevity, increase the body's resistance to negative factors of professional activities; empirical methods included pedagogical observation, interviews, questionnaires in order to clarify the characteristics of the professional activities of management level officers, finding ways to apply physical exercises by representatives of the security and defence sector to reduce the negative impact of management activities factors on their state of health.

The research was performed according to the requirements of the Regulations on Academic Honesty at the National Academy of Internal Affairs, which were developed on the basis of Ukrainian and world experience of ethical rulemaking. The consent to participate in the research was obtained from all subjects.

## RESULTS

One of the main negative factors of modern management activities is low motor performance. Low motor performance results in various disorders of the body's systems, metabolism, and the appearance of excess weight, which adversely affects the state of health and causes various diseases [12]. First of all, the cardiovascular system suffers (atherosclerosis, hypertension, coronary heart disease, etc.), the condition of the musculoskeletal system deteriorates. As a result, there is a phenomenon of detraining (deterioration of the bear of functional loads). Low motor performance, nervous and emotional stress lead to chronic stress [13]. Low motor performance adversely affects the condition of the muscular system. Muscles become flabby and shrink in size. The pectoral muscle sling does

not perform its main function (the spine is not held in a normal position), which leads to a deterioration in the brain blood supply and, consequently, a decrease in mental and physical working ability of management level officers. Atrophic changes in part of the muscle fibres are also noticeable, and the layer of adipose tissue between them increases. Stability and reliability of coordination of movements are lost, force and endurance of muscles decrease. Muscle atrophy negatively affects the adaptive mechanisms of blood circulation during physical load and ultimately negatively affects the officers' health and their ability to work [14].

In addition management level officers experience high nervous and emotional stress. The scientists [13, 15] claim that there is a decrease in working ability, increased heart rate, respiration and pressure, difficulty distributing attention, narrowing the scope of attention and memory, increasing the number of erroneous actions, and rapid fatigue as a result of nervous and emotional stress. A decrease in the functional capabilities of the body and its reserves lie at the heart of fatigue. One of the first signs of fatigue is a decrease in mental activity since the service activities of management level officers are closer in nature to the types of mental and intellectual work. Memory, concentration, distribution and switching of attention deteriorate in case of fatigue. The initial period of fatigue is characterised by a noticeable decrease in muscle strength and endurance, impaired coordination of movements, as well as the speed of reactions. Fatigue can also be manifested in the appearance of irritability, deterioration of general physical and mental state.

It would seem that the need for constant physical improvement of management level officers disappears in connection with the reduction of muscular energy expenditure and the increase of mental load. However, the studies show that reducing the share of muscle energy expenditure in the process of work in many cases does not reduce, but increases the requirements for physical fitness of specialists [16]. Thus, adverse factors dramatically impair the physical condition, working ability and health of management level officers and the effectiveness of their overall service activities. Therefore, the importance and role of physical education in improving the effectiveness of management activities, strengthening the health and tolerance of officers towards various negative factors is increasing as never before. Physical education, solving its basic task i. e. the development of basic physical qualities, can solve aspect problems such as the formation of emotional stability, health promotion, formation of tolerance towards professional activities negative factors, etc. [2, 9, 19, 17].

We conducted a survey of 82 management level officers in order to study the observance of a healthy lifestyle, performing exercises to overcome the negative factors of management activities by the management level officers. The results of the analysis of the answers regarding a healthy lifestyle keeping by management level officers showed that only 10.3 % of officers regularly do morning exercises every day (23 % – sometimes and 66.7 % – never); 85.7 % of

officers get to the place of their service by public transport or by their own car and only 14.3 % take a walk (mostly officers who live in dormitories near the place of their service). On weekends and holidays, preference is given to passive types of physical activities and recreation (watching TV, working on a computer, improving the professional level, etc.) by 41.3 % officers; 37.3 % of officers spend their free time with family and friends and only 9.5 % of officers engage in exercises and sports, practice hardening techniques, and prefer hiking. There is much tension around the issue of obsessive habits, including smoking. Thus, the question concerning tobacco abuse revealed the fact that more than 50 % of management level officers smoke, whereupon 20.6 % of surveyed officers use no more than half a pack of cigarettes a day, 30.9 % – one pack or more a day; only 6.7 % of management level officers answered that they do not smoke. The analysis of the answers to the question concerning the application of health promotion factors showed that many management level officers (67.1 %) rarely or almost never use factors that contribute to the preservation and promotion of health.

Irritability, depression, tiredness, headache and other symptoms due to the negative effect of management activities factors at the end of the working day (week) are experienced by 88.9% of officers (22.2 % – sometimes, 51.6 % – often; 15.1 % – always) and only 11.1 % officers never experience such symptoms. It is important to note that the majority of officers, who always have similar symptoms and complaints, belong to the older age groups (over 45 years old, 94.7 %), which indicates that the negative impact of management activities increases with age along with the risk of various diseases occurrence.

The effectiveness of physical training in the formation of the necessary qualities of specialists depends on the variety of means used, their scope and direction. The studies [5, 7] showed the need for integrated use of various means of physical education to optimize the physical well-being of servicemen, whose activities take place in conditions of limited motor performance. The peculiarity of the organization of physical education of servicemen, whose activities have a pronounced hypodynamic nature, is the use of general physical training means with the predominant use of strength and endurance exercises. The scientists [10, 11] found that the overall level of development of officers' physical qualities depends largely on the development of endurance and strength. Therefore, physical education classes for management level officers, whose activities are accompanied by the influence of insufficient motor performance and other negative factors, should be built on the principle of versatile training.

The use of physical exercises to restore working ability during mental work is of particular interest. A high level of mental working ability is maintained provided that there is constant optimal excitability of the respective areas of the cerebral cortex. As a result of long-term mental work there are inhibitory processes in the higher parts of the brain that cause a decrease in attention, memory, ability to creatively analyse information, and cause making errors. Periodic

transition to physical exercises in the form of classes can speed up recovery of working ability, relieve fatigue feeling, have a general health effect.

Physical exercises help to improve the mobility of nervous processes in the course of mental work and thus create the conditions for longer-term working abilities. The author also notes that the stability of mental work depends on the level of general physical fitness. Working ability indicators were less stable in people having a low level of general physical fitness. In the case of performing exercises in the process of mental activities, their selection and duration of working performance depend on the nature of mental work. If it consists of the usual mental operations that do not contain complex analytical components, then in this case, moderate loads of increased duration will not cause a decrease in the productivity of the main work. But if the mental work is creative, associated with the analysis of a wide range of information, then in this case, it is not allowed disrupting the system of intercentral relations by switching to intense muscle activities. Here the positive effect is achieved by mild exercises, the performance of which does not violate the dynamic stereotype of the main work in the cortex. Excessive emotional impact, which can also increase the excitability of the central nervous system and complicate further inclusion in mental work, should also be avoided when performing exercises in the process of mental activities.

The content of the complexes that are performed in the process of mental work should include exercises that increase resistance to long-term maintenance of a monotonous posture and physical inactivity (general development exercises and exercises with your own body weight); exercises that slightly excite the central nervous system and have a preventive effect (hiking, slow running, etc.); exercises that develop the muscles of the back and abdomen, as well as stimulate blood circulation; special exercises that focus the nervous system on future work.

## DISCUSSION

Management activities require officers to maintain a long-lasting permanent working position. However, its long-term maintenance (static mode) is often more tiresome than work, accompanied by little motor performance. A disturbance of correlation between pulmonary ventilation and blood supply of lungs owing to unevenness of breath and decrease in saturation of blood with oxygen occurs in the conditions of static work of average complexity. As a result, the phenomenon of oxygen starvation (hypoxia) and the accumulation of carbon dioxide are developed in the body [8, 11, 18]. Scientists found [12, 13, 19, 20] that only some servicemen endure 4-hour immobility in a "sitting" posture without complaints of exhaustion, in which fatigue is localized in the muscles of the neck, back and legs; the cardiovascular system suffers the most. The expenditure of neuromuscular energy to maintain posture is greater the more uncomfortable posture is. Blood circulation deteriorates, stagnation occurs, and working ability is reduced in

the case of long-term maintenance of a monotonous posture.

Management level officers spend most of their office hours indoors in a forced posture (usually sitting), which convincingly demonstrates the effect of a significant number of negative factors on the officers' body systems, including: hypodynamics and hypokinesia, working hours and weeks, nervous and emotional stress, mental overload and stress and others. In addition, obsessive habits (mostly smoking) and lack of time for physical training do not provide the necessary level of physical fitness and health of management level officers for the effective implementation of their management activities. Such activities occur over many years, and with age, these factors lead to a significant decrease in mental and physical performance, deteriorating the state of health and the functioning of major body systems.

We set that the tasks of physical education of management level personnel of the security and defence sector of Ukraine are to increase the level of general physical fitness, strengthen health, improve the functionality of the body's major systems, prevent diseases, prolong professional longevity, ensure a high level of intellectual work capacity, enhance resistance to negative factors of management activities.

It is established that the use of physical exercises in the daily routine of management level officers should be aimed at solving the following tasks:

- in the process of management activities – to change the dynamics of subcortical processes, to create an optimal background of excitability; to improve cerebral blood circulation and metabolism, actively influencing the cardiovascular system; to carry out preventive influence on the musculoskeletal system and digestive organs; to eliminate stagnation (especially in the pelvis and lower extremities); to ensure high mental working ability (to improve memory, thinking, attention); to improve emotional state;
- at the end of the working day – to develop and improve physical qualities (formation of general physical fitness); to strengthen muscles (to form a pectoral muscle sling); to strengthen health, improve the activities of the cardiovascular, respiratory and other systems of the body; to reduce the impact of physical inactivity and other adverse factors of service activities; to reduce fatigue due to the inclusion in the vigorous activities of muscle groups that did not participate in the work process, and to recover working ability.

## CONCLUSIONS

It was found that management activities are characterized by a number of negative factors (low motor performance, stress, psychologic stress, monogony, etc.), which negatively affect the management level officers' bodies. With systematic interference, they significantly worsen the state of officers' health and negatively affect the effectiveness of their professional (management) activities. Physical education has significant potential in improving the efficiency of professional activities of management level officers, strengthening their health, enhancing working ability and prolonging professional longevity.

It was established that the means of physical training of management level officers of the security and defence sector of Ukraine should be simple, available and at the same time effective and health-improving exercises of general physical training.

The direction of improving physical training of management level personnel of the security and defence sector of Ukraine is determined as increasing the amount of general physical training, conducting classes with different orientations, taking into account the training within the working time pattern.

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**ORCID and contibutionship:**

*Ivan M. Okhrimenko: 0000-0002-8813-5107* <sup>A,B,F</sup>

*Nina V. Lyhun: 0000-0002-3575-4350* <sup>B,E</sup>

*Viktoriiia P. Pryimak: 0000-0002-2962-1113* <sup>C,E</sup>

*Yaroslav I. Korol: 0000-0003-2274-5858* <sup>A,D</sup>

*Mykhailo S. Myroshnychenko: 0000-0002-6920-8374* <sup>B,E</sup>

**Conflict of interest:**

*The Authors declare no conflict of interest.*

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**CORRESPONDING AUTHOR****Ivan M. Okhrimenko**

National Academy of Internal Affairs, Kyiv, Ukraine

tel: +380679903905

e-mail: ivango-07@ukr.net

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