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The relationship between the development of cadets' motor and volitional qualities through various types of motor activity

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Взаємозв'язок між розвитком рухових та вольових якостей курсантів у процесі занять різними видами рухової активності

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Introduction

In modern society, considerable attention is paid to combating terrorism, crime, and the illegal circulation of large quantities of weapons, explosives, and ammunition, which destabilizes social development. The scale of these phenomena poses a threat to Ukraine's territorial integrity and the successful implementation of political transformations and socio-economic reforms. Recently, confrontations between law enforcement officers and criminal elements have increased and become significantly more complex [1; 2]. Criminals are well armed and technically equipped, and actively resist Ukrainian law enforcement officers during their arrest. When performing their service duties, law enforcement officers may encounter confrontations with criminals in extreme situations, where the outcome depends on their level of specialized physical training and their ability to apply hand-to-hand combat (HHC) techniques, depending on the conditions of the arrest. Mastering HHC techniques and their further refinement is an integral part of specialized physical training for law enforcement specialists, particularly relevant when performing atypical professional tasks [3; 4; 5]. The foundation for a high level of specialized physical training for law enforcement specialists is formed and refined during their training at higher educational institutions with specific learning environment (HEIs with SLE). HHC training sessions are held to develop self-defense skills, neutralize and detain persons who threaten public order or the personal safety of citizens, and foster the volitional qualities of cadets as future law enforcement officers (courage, determination, initiative, and ingenuity) [6; 7; 8]. Many scientific works are devoted to the problem of developing the motor and volitional qualities of law enforcement officers by means of HHC [9; 10, 11; 12; 13], However, the issue of researching the relationship between the level of development of cadets' motor and volitional qualities at HEIs with SLE in the process of their HHC training sessions, compared to other types of sports and motor activity, has not been sufficiently explored, which determined the choice of the research topic.

The aim of the research is to investigate the relationship between the level of development of cadets' motor and volitional qualities during engagement in various types of motor activity.

Object, materials and research methods

Participants. The research, conducted in the 2024–2025 academic year, involved 352 male cadets from the National Academy of Internal Affairs (NAIA, Kyiv, Ukraine) majoring in "Law Enforcement" and "Law" specialties. To study the relationship between the level of development of cadets' motor and volitional qualities during engagement in various types of motor activity, we formed three groups of cadets: the HHC Group (n=54) included cadets who, in addition to attending compulsory special physical training sessions during their studies at the HEI with SLE, also systematically participated in a hand-to-hand combat sports club during their sporting and mass participation events (SMPEs) (the 1st training year – 14 people, the 2nd training year – 16 people, the 3rd training year – 13 people, the 4th training year – 11 people); the SC Group (n=91) included cadets who, like the cadets in the HHC Group, additionally participated in sports during their SMPEs hours in various sport clubs of the HEI with SLE in CrossFit, multi-event competitions, orienteering, sports games, and powerlifting (the 1st training year – 24 people, the 2nd training year – 26 people, the 3rd training year – 23 people, the 4th training year – 18 people); the K Group (n=207) included cadets who, during their studies, attended only compulsory training sessions in special physical training

and did not engage in additional sports activities; their SMPEs were conducted according to standard approved options (the 1st training year – 53 people, the 2nd training year – 45 people, the 3rd training year – 54 people, the 4th training year – 55 people). The amount of physical activity per week (in hours) did not differ between the study groups. The primary variable was the content of the motor activity training sessions across the groups. The criteria for inclusion of participants in the study were: male cadets, willingness to engage in a particular sport during training (determined by a survey at the beginning of the academic year), no health contraindications to sports, voluntary participation of cadets in the study (all cadets were informed that their involvement in the study was solely for scientific purposes, and they provided informed consent for voluntary participation). The exclusion criterion was the cadets' desire to withdraw from the research at any time of their own accord.

Research methods: analysis and generalization of literary sources, testing, psychodiagnostic methods, methods of mathematical statistics. Analysis and generalization of literary sources were used to conduct an analytical review of scientific sources on the outlined range of issues (30 sources from Scopus and Web of Science Core Collection were analyzed).

Testing as a scientific method was used to characterize the level of development of cadets' motor qualities at the HEI with SLE. We investigated the results of cadets in the 100 m run (speed qualities), pull-ups (strength qualities), 3 km run (endurance), 6x100 m shuttle run (applied motor skills in accelerated movement with weapons), and hand-to-hand combat techniques (applied motor skills in hand-to-hand combat).

Psychodiagnostic methods were used to characterize cadets' volitional qualities during various types of motor activity. Cadets were tested using five methods that allowed for the assessment of seven indicators of their volitional qualities: the "Willpower Test" method (indicator 1 – level of willpower); the "Impulsivity Study" method (indicator 2 – level of impulsivity); the "Study of Volitional Self-Regulation" method (indicators 3, 4, 5 – level of volitional self-regulation, level of perseverance, level of self-control); the "Self-Assessment of Patience" method (indicator 6 – level of patience); the "Subjective Control Locus Study" method (indicator 7 – level of subjective control).

Data processing. The methods of mathematical statistics were used to process the data obtained. To determine the relationship between the level of development of cadets' motor and volitional qualities, we used a selective linear correlation coefficient (Pearson's correlation coefficient). Pearson's correlation coefficient (ρ) is an indicator of linear dependence between two variables, which takes values from -1 to +1 inclusive. It is equal to the sum of the products of the deviations divided by the product of their standard deviations. A value of +1 means that the dependence between the variables is linear, and all points of the function lie on a straight line that reflects the growth of one variable as the other grows. With correlation coefficient values from 0 to +1, the correlation is positive (positive relationship). A value of -1 means that all points lie on a line that reflects the decrease of one variable as the other increases. With correlation coefficient values from -1 to 0, the correlation is negative (negative relationship). If the correlation coefficient is 0, there is no linear correlation between the variables. If ρ = -0.09 – 0.0 or 0.0 – 0.09, there is no correlation; if ρ = -0.3 – -0.1 or 0.1 – 0.3, the correlation is low (weak relationship); if ρ = -0.5 – -0.3 or 0.3 – 0.5, the correlation is average (moderate relationship); if ρ = -0.7 – -0.5 or 0.5 – 0.7, the correlation is above average (noticeable relationship); if ρ = -0.9 – -0.7 or 0.7 – 0.9, the correlation is high (close relationship); if ρ = -1.0 – -0.9 or 0.9 – 1.0, the correlation is very high (strong relationship); if ρ = -1.0 or 1.0, the nature of the relationship is considered functional. All statistical analyses were performed using SPSS software, version 10.0, adapted for medical and biological research.

Ethics. The procedure for organizing the study and the topic of the article were previously agreed with the Committee on compliance with Academic Integrity and Ethics of the NAIA. Also, this study followed the regulations of the World Medical Association Declaration of Helsinki. Informed consent was received from all participants who took part in this study.

Research results

The results of the study of the relationship between the level of development of cadets' motor and volitional qualities of three groups, HHC (n = 54), SC (n = 91), and K (n = 207), during their training at the HEI with SLE are presented in Table 1.

The analysis of the results shows that the relationship between the results of the 100 m run and all volitional qualities of cadets in all three groups is weak (ρ does not exceed 0.28 c. u.), and for such volitional qualities as the level of volitional self-regulation, the level of self-control, and the level of subjective control, it is practically absent (ρ = |0.06-0.17| c. u.). A significant influence of the level of development of speed qualities was found on the level of development of such volitional qualities: willpower in cadets of SC Group (ρ = -0.22 c. u. at $p < 0.05$); impulsiveness in cadets of SC Group (ρ = 0.28 c. u. at $p < 0.05$) and K Group (ρ = 0.23 c. u. at $p < 0.05$); persistence in cadets of SC Group (ρ = -0.26 c. u. at $p < 0.05$) and K Group (ρ = -0.20 c. u. at $p < 0.05$); patience in cadets of SC Group (ρ = -0.23 c. u. at $p < 0.05$) and K Group (ρ = -0.21 c. u. at $p < 0.05$). Thus, speed qualities have a negligible effect on the development of volitional qualities in cadets of all three groups studied. The same statement is true regarding the influence of cadets' volitional qualities on the development of their speed qualities.

The analysis of the relationship between the level of development of cadets' strength qualities and their volitional qualities in the process of training at the HEI with SLE shows that for most volitional qualities (willpower, level of volitional self-regulation, self-control, patience)

Table 1

The relationship between the level of development of cadets' motor and volitional qualities in HHC (n = 54), SC (n = 91), and K (n = 207) groups, c. u.

Motor skills	Groups	Volitional qualities						
		1	2	3	4	5	6	7
Speed qualities	HHC	-0.19	+0.25	-0.12	-0.21	-0.14	-0.25	-0.08
	SC	-0.22	+0.28	-0.16	-0.26	-0.12	-0.23	-0.11
	K	-0.17	+0.23	-0.15	-0.20	-0.17	-0.21	-0.06
Strength qualities	HHC	+0.32	-0.23	+0.34	+0.57	+0.35	+0.43	+0.20
	SC	+0.35	-0.19	+0.28	+0.61	+0.31	+0.46	+0.16
	K	+0.28	-0.18	+0.29	+0.63	+0.32	+0.40	+0.13
Endurance	HHC	-0.66	+0.56	-0.61	-0.73	-0.51	-0.75	-0.36
	SC	-0.69	+0.54	-0.63	-0.70	-0.49	-0.72	-0.29
	K	-0.62	+0.50	-0.58	-0.63	-0.44	-0.67	-0.25
Applied motor skills in moving with weapons	HHC	-0.43	+0.47	-0.50	-0.65	-0.38	-0.66	-0.41
	SC	-0.39	+0.45	-0.52	-0.68	-0.41	-0.69	-0.45
	K	-0.38	+0.41	-0.49	-0.62	-0.35	-0.64	-0.39
Applied motor skills in hand-to-hand combat	HHC	+0.62	-0.42	+0.55	+0.65	+0.59	+0.70	+0.49
	SC	+0.54	-0.38	+0.51	+0.63	+0.52	+0.64	+0.47
	K	+0.48	-0.33	+0.44	+0.60	+0.51	+0.63	+0.42

Notes:

1) The statistically significant value of the correlation coefficient ρ for HHC Group at $p < 0.05$ is 0.27 c. u.; at $p < 0.01$ it is 0.36 c. u.; for SC Group at $p < 0.05$ it is 0.20 c. u.; at $p < 0.01$ is 0.27 c. u.; for K Group at $p < 0.05$ is 0.19 c. u.; at $p < 0.01$ is 0.25 c. u.;

2) volitional qualities: 1 – level of willpower; 2 – level of impulsivity; 3 – level of volitional self-regulation; 4 – level of perseverance; 5 – level of self-control; 6 – level of patience; 7 – level of subjective control.

reveal an average correlation (moderate relationship) with the cadets' results in strength exercises on the horizontal bar – in all three groups, the correlation coefficients are within the range of 0.28–0.46 c. u. An above average correlation was found between the results on the horizontal bar and the level of perseverance development in cadets of all three groups (ρ = 0.31 – 0.35 c. u.). A weak relationship was found with such volitional qualities of cadets as impulsiveness (ρ = -0.18 – -0.23 c. u.) and the level of subjective control (ρ = 0.13 – 0.20 c. u.).

A reliable relationship between strength qualities and the level of willpower was found in cadets of HHC Group (ρ = 0.32 c. u. at $p < 0.05$), SC Group (ρ = 0.35 c. u. at $p < 0.01$), and K Group (ρ = 0.28 c. u. at $p < 0.01$); the level of volitional self-regulation in HHC Group (ρ = 0.34 c. u. at $p < 0.05$), SC Group (ρ = 0.28 c. u. at $p < 0.01$) and K Group (ρ = 0.29 c. u. at $p < 0.01$); the level of persistence in HHC Group (ρ = 0.57 c. u. at $p < 0.01$), SC Group (ρ = 0.61 c. u. at $p < 0.01$) and K Group (ρ = 0.63 c. u. at $p < 0.01$); the level of self-control in HHC Group (ρ = 0.35 c. u. at $p < 0.05$), SC Group (ρ = 0.31 c. u. at $p < 0.01$) and K Group (ρ = 0.32 c. u. at $p < 0.01$); the level of patience in HHC Group (ρ = 0.43 c. u. at $p < 0.01$), SC Group (ρ = 0.46 c. u. at $p < 0.01$) and K Group (ρ = 0.40 c. u. at $p < 0.01$). This indicates that strength exercises on the horizontal bar have a positive effect on the level of development of most of the studied volitional qualities. At the same time, higher correlation coefficients were observed in HHC Group and SC Group, which once again confirm the effect of additional sports activities during training at the HEI with SLE.

When studying the relationship between the level of endurance development in cadets and the level of their volitional qualities, we found that, according to most of the methods studied, the correlation between the results of the 3 km run and volitional qualities is above average (noticeable relationship) and high (close relationship). Thus, a noticeable reliable connection was found with: the level of willpower in cadets of HHC Group (ρ = -0.66 c. u. at $p < 0.01$), SC Group (ρ = -0.69 c. u. at $p < 0.01$) and K Group (ρ = 0.62 c. u. at $p < 0.01$); the level of impulsivity (the lower the impulsivity, the higher the results in the 3 km run) in HHC Group (ρ = 0.56 c. u. at $p < 0.01$), SC Group (ρ = 0.54 c. u. at $p < 0.01$) and K Group (ρ = 0.50 c. u. at $p < 0.01$); level of volitional self-regulation in HHC Group (ρ = -0.61 c. u. at $p < 0.01$), SC Group (ρ = -0.63 c. u. at $p < 0.01$) and K Group (ρ = -0.68 c. u. at $p < 0.01$); level of perseverance in K Group (ρ = -0.63 c. u. at $p < 0.01$); level of self-control in HHC Group (ρ = -0.51 c. u. at $p < 0.01$), SC Group (ρ = -0.49 c. u. at $p < 0.01$) and K Group (ρ = -0.44 c. u. at $p < 0.01$); level of patience in K Group (ρ = -0.67 c. u. at $p < 0.01$). A close reliable relationship was found with the level of perseverance in HHC Group (ρ = -0.73 c. u. at $p < 0.01$) and SC Group (ρ = -0.70 c. u. at $p < 0.01$) and patience in HHC Group (ρ = -0.72 c. u. at $p < 0.01$), SC Group (ρ = -0.72 c. u. at $p < 0.01$). A weak but significant relationship was found with the level of subjective control in cadets of HHC Group (ρ = -0.36 c. u. at $p < 0.01$), SC Group (ρ = -0.29 c. u.

at p < 0.01), and K Group (ρ = -0.25 c. u. at p < 0.01) (Fig. 1).

The analysis of the relationship between endurance and the development of volitional qualities in cadets showed that endurance exercises aimed at developing cadets' ability to withstand prolonged stress, endure, and overcome fatigue are among the most effective in developing their volitional qualities. Moreover, additional sports activities involving constant physical and psychological loads, systematic participation in competitions (applied tests) are more effective in developing cadets' volitional qualities than traditional physical exercises during various forms of physical training. This is confirmed by higher correlation coefficients for most of the studied volitional qualities in cadets of HHC Group and SC Group, compared to K Group.

In the process of studying the relationship between the level of development of applied motor skills in accelerated movement with weapons, which were tested based on the results of the 6x100 m shuttle run, and volitional qualities in cadets, we found that the correlation coefficients for volitional qualities show a similar trend to the results of the 3 km run. However, the correlation between the results of the 6x100 m shuttle run and all volitional qualities of cadets is weaker compared to the results of the 3 km run. An above average correlation (noticeable relationship) was found in cadets of all three groups with the level of perseverance (in HHC Group (ρ = -0.65 c. u. at p < 0.01), SC Group (ρ = -0.68 c. u. at p < 0.01) and K Group (ρ = -0.62 c. u. at p < 0.01)) and the level of patience (in HHC Group (ρ = -0.66 c. u. at p < 0.01), SC Group (ρ = -0.69 c. u. at p < 0.01) and K Group (ρ = -0.64 c. u. at p < 0.01)). An average correlation (moderate relationship) was found among cadets in all three groups with the level of willpower (in HHC Group (ρ = -0.43 c. u. at p < 0.01), SC Group (ρ = -0.39 c. u. at p < 0.01) and K Group (ρ = -0.38 c. u. at p < 0.01)); level of impulsivity (in HHC Group (ρ = 0.47 c. u. at p < 0.01), SC Group (ρ = 0.45 c. u. at p < 0.01) and K Group (ρ = 0.41 c. u. at p < 0.01)); level of volitional self-regulation (in HHC Group (ρ = -0.50 c. u. at p < 0.01), SC Group (ρ = -0.52 c. u. at p < 0.01) and K Group (ρ = -0.49 c. u. at p < 0.01)); level of self-control (in HHC Group (ρ = -0.38 c. u. at p < 0.01), SC Group (ρ = -0.41 c. u. at p < 0.01) and K Group (ρ = -0.35 c. u. at p < 0.01)); level of subjective control (in HHC Group (ρ = -0.38 c. u. at p < 0.01), SC Group (ρ = -0.41 c. u. at p < 0.01) and K Group (ρ = -0.35 c. u. at p < 0.01)).

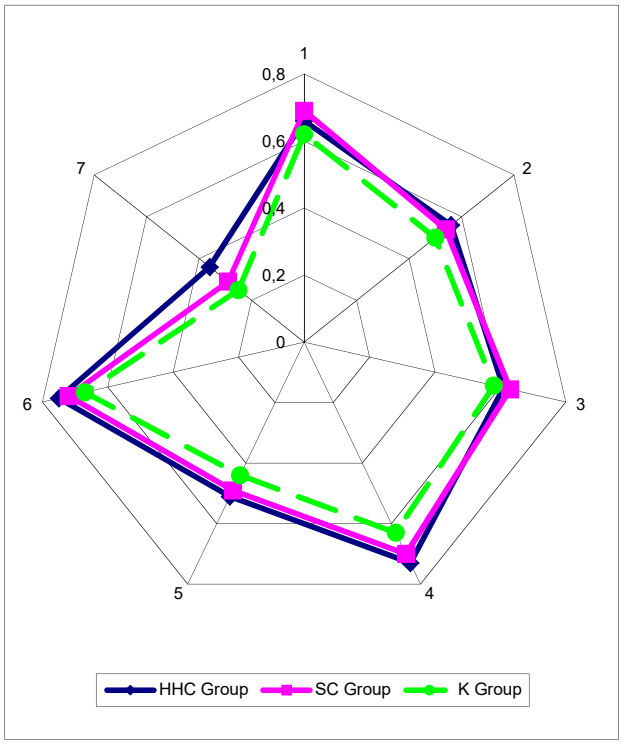

Fig. 1. The relationship between the level of development of cadets' endurance and volitional qualities in HHC (n = 54), SC (n = 91), and K (n = 207) groups, c. u. (1 – level of willpower; 2 – level of impulsivity; 3 – level of volitional self-regulation; 4 – level of perseverance; 5 – level of self-control; 6 – level of patience; 7 – level of subjective control)

During the study of the relationship between the level of volitional qualities of cadets and the results of their performance of HHC techniques, it was found that the highest correlation coefficients with all volitional qualities were observed in cadets of HHC Group, which emphasizes the effectiveness of HHC training sessions in developing volitional qualities of future law enforcement officers. A reliable close relationship (high correlation) was found between the indicators of performing HHC techniques and the level of patience in cadets of HHC Group (ρ = 0.70 c. u. at p < 0.01). A higher than average correlation (noticeable relationship) was found with the level of willpower (in HHC Group (ρ = 0.62 c. u. at p < 0.01), SC Group (ρ = 0.54 c. u. at p < 0.01)); level of volitional self-regulation (in HHC Group (ρ = 0.55 c. u. at p < 0.01), SC Group (ρ = 0.51 c. u. at p < 0.01)); level of perseverance (in HHC Group (ρ = 0.65 c. u. at p < 0.01), SC Group (ρ = 0.63 c. u. at p < 0.01) and K Group (ρ = 0.60 c. u. at p < 0.01)); level of self-control (in HHC Group (ρ = 0.59 c. u. at p < 0.01), SC Group (ρ = 0.52 c. u. at p < 0.01) and K Group (ρ = 0.51 c. u. at p < 0.01)); level of patience (in SC Group (ρ = 0.64 c. u. at p < 0.01) and K Group (ρ = 0.63 c. u. at p < 0.01)). An average correlation (moderate relationship) was found with the level of willpower (in K Group (ρ = 0.48 c. u. at p < 0.01)); with the level of impulsivity (in HHC Group (ρ = -0.42 c. u. at p < 0.01), SC Group (ρ = -0.38 c. u. at p < 0.01) and K Group (ρ = -0.33 c. u. at p < 0.01)); with the level of volitional self-regulation (in K Group (ρ = 0.44 c. u. at p < 0.01)); with the level of subjective control (in HHC Group (ρ = 0.44 c. u. at p < 0.01), SC Group (ρ = 0.47 c. u. at p < 0.01) and K Group (ρ = 0.42 c. u. at p < 0.01)).

Discussion of research results

The training of modern police officers is carried out with the socio-political situation in mind. An analysis of trends in the real-world conditions of police service shows that these conditions create objective preconditions for encounters with danger in various circumstances, including physical and functional fatigue [14; 15; 16]. All this naturally affects the development of law enforcement officers' personal and professional potential.

The modern service and combat activities of police officers often cross the line into extreme forms of legal conflict with lawbreakers (intense psychological confrontation, direct and indirect physical confrontation, search and pursuit of offenders, etc.) [17]. Hand-to-hand combat is a complex martial art that places high demands on an employee's physical and psychological training [18; 19; 20]. Research [21] shows that HHC is a type of police service activity in which officers engage in close combat with criminals. Hand-to-hand combat is a type of close combat in which opponents use personal firearms, cold weapons, improvised means, and unarmed combat techniques [22]. Hand-to-hand combat, as a sport, is relatively young, but it is the most versatile of the contact martial arts. It is based on a synthesis of well-known martial arts (sambo, boxing, karate, kickboxing, judo, etc.), which focus on striking techniques with hands and feet, wrestling techniques, pain and choking techniques [23].

Historical experience shows that a high level of physical fitness has consistently been an important indicator of police officers' readiness for professional activities [24; 25]. The law enforcement structure of any country in the world is a state armed executive body, one of whose activities is to protect the life, health, rights, and freedoms of citizens, property, the natural environment, and the interests of society and the state from illegal encroachments. In carrying out the law enforcement tasks assigned to this structure, personnel have the right to use physical force, special means, and firearms in accordance with current legislation. Law enforcement officers must master hand-to-hand combat techniques to ensure the performance of their duties in all circumstances, even if it means resorting to forceful methods to detain offenders who do not comply with lawful demands [1; 20; 26]. Practice shows that knowledge of the legal basis for the use of hand-to-hand combat techniques contributes to their high-quality and rapid implementation. Based on this and in accordance with Ukrainian law, every employee must know the legal basis for the use of hand-to-hand combat techniques in various situations.

Scientists [27; 28] note that hand-to-hand combat is a means of training, educating, and developing the technical, tactical, physical, and mental readiness of law enforcement officers to act in difficult close-combat conditions, i.e., in direct contact with the enemy. According to scientists, a complex of various physical exercises not only provides training in the techniques and tactics of hand-to-hand combat with an opponent, but also develops speed of action, agility and strength, endurance, courage and determination, resourcefulness and initiative, confidence in one's abilities, improving mental stability, and gaining experience in emotional and volitional behavior [7; 24]. Hand-to-hand combat allows for the adequate development of the necessary physical and special qualities, the formation of critical defensive and motor skills, the improvement of professional techniques and actions, and the cultivation of moral and mental qualities. Hand-to-hand combat also helps prevent antisocial behavior among young people, form and promote a healthy lifestyle, choose favorable behavior models, increase motor activity, and involve young people in systematic physical education and sports [29; 30]. The development of endurance is no exception, as evidenced by the indicators we have obtained. At the same time, the development of cadets' ability to endure prolonged stress and fatigue is one of the most effective ways to develop their volitional qualities.

The results of our research generally showed that the development of cadets' motor skills, both during HHC training sessions and in other sports, has a positive effect on volitional qualities – a reliable relationship of varying degrees was found. At the same time, unlike other sports, HHC training sessions have the most significant impact on the psychological readiness of future law enforcement officers to perform their duties. Our results confirmed the conclusions of many scientists [4; 5; 6, 10; 12; 14; 20; 25] regarding the high effectiveness of motor activity and the impact of sports on the formation of the psychological readiness of future law enforcement officers to perform professional duties, in particular the development of cadets' volitional qualities.

Prospects for further research

It is planned to investigate the impact of various types of motor activity on cadets' physical and mental health indicators.

Conclusions

The research shows that all volitional qualities have significant, varying degrees of correlation with the level of development of cadets' motor qualities as future law enforcement officers. A high and average correlation between the levels of development of most volitional qualities of cadets across all three groups was found for indicators of endurance development and applied motor skills in HHC, and for accelerated movement with weapons. The highest correlation coefficients between the levels of development of motor and volitional qualities were found in groups of cadets who also practiced sports, including hand-to-hand combat and other types.

The results of the research allow us to conclude that additional physical exercise and sports, especially HHC, are highly effective for the development of both motor and volitional qualities of future law enforcement officers, which, in general, will contribute to the performance of specific tasks in their future professional activities.

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Purpose. The purpose of the work is to investigate the relationship between the level of development of cadets' motor and volitional qualities during engagement in various types of motor activity.

Materials and methods. The research, conducted in the 2024-2025 academic year, involved 352 male cadets from the National Academy of Internal Affairs (NAIA, Kyiv, Ukraine) majoring in "Law Enforcement" and "Law" specialties. We formed three groups of cadets: the HHC Group (n=54) included cadets who, in addition to attending compulsory special physical training sessions, also systematically participated in a hand-to-hand combat sports club; the SC Group (n=91) included cadets who additionally participated in sport clubs in CrossFit, multi-event competitions, orienteering, sports games, and powerlifting; the K Group (n=207) included cadets who, during their studies, attended only compulsory training sessions in special physical training and did not engage in additional sports activities. The amount of physical activity per week (in hours) did not differ between the study groups. Research methods: analysis and generalization of literary sources, testing, psychodiagnostic methods, methods of mathematical statistics.

Results. Conducted research shows that all volitional qualities have significant, varying degrees of correlation with the level of development of cadets' motor qualities as future law enforcement officers. A high and average correlation between the levels of development of most volitional qualities of cadets across all three groups was found for indicators of endurance development and applied motor skills in HHC, and for accelerated movement with weapons. The highest correlation coefficients between the levels of development of motor and volitional qualities were found in groups of cadets who also practiced sports, including hand-to-hand combat and other types.

Conclusions. The results of the research allow us to conclude that additional physical exercise and sports, especially HHC, are highly effective for the development of both motor and volitional qualities of future law enforcement officers, which, in general, will contribute to the performance of specific tasks in their future professional activities.

Key words: motor qualities, volitional qualities, cadets, hand-to-hand combat, motor activity.

Мета роботи – дослідити взаємозв'язок між рівнем розвитку рухових та вольових якостей курсантів у процесі занять різними видами рухової активності.

Матеріали та методи. У дослідженні, яке проводилося у 2024–2025 навчальному році, взяли участь 352 курсанти-чоловіки Національної академії внутрішніх справ (Україна, м. Київ, НАВС), які навчалися за спеціальністю «Правоохоронна діяльність» та «Право». Для досягнення мети дослідження ми сформували три групи курсантів: група РБ (n=54) включала курсантів, які під час навчання, окрім відвідування обов'язкових навчальних занять зі спеціальної фізичної підготовки, систематично займалися у спортивній секції з рукопашного бою під час спортивно-масової роботи (СМР) (1-й курс – 14 осіб, 2-й курс – 16 осіб, 3-й курс – 13 осіб, 4-й курс – 11 осіб); група С (n=91) містила курсантів, які, як і курсанти групи РБ, додатково у години СМР займалися спортом у секціях з кросфіту, багатоборства, спортивного орієнтування, спортивних ігор, паверліфтингу (1-й курс – 24 особи, 2-й курс – 26 осіб, 3-й курс – 23 особи, 4-й курс – 18 осіб); група К (n=207) включала курсантів, які під час навчання, відвідували лише обов'язкові навчальні заняття зі спеціальної фізичної підготовки та додатково не займалися спортом, СМР проводилася за стандартними затвердженими програмами (1-й курс – 53 особи, 2-й курс – 45 осіб, 3-й курс – 54 особи, 4-й курс – 55 осіб). Обсяг фізичного навантаження на тиждень (у годинах) у досліджуваних групах не відрізнявся. Основною змінною був зміст занять руховою активністю у кожній з груп. Критерії включення: курсанти чоловічої статі, бажання займатися тим або іншим видом спорту під час навчання (визначалося за результатами опитування на початку навчального року), відсутність протипоказань за станом здоров'я до занять спортом; критерій виключення – бажання курсанта вийти з дослідження у будь-який зручний час. Методи дослідження: теоретичний аналіз та узагальнення літературних джерел, тестування, психодіагностичні методи, методи математичної статистики. Для характеристики рівня розвитку рухових якостей курсантів було досліджено їх результати з бігу на 100 м (швидкісні якості), підтягування на перекладині (силові якості), з бігу на 3 км (витривалість), човникового бігу 6х100 м (прикладні рухові навички у прискореному пересуванні зі зброєю); виконання прийомів рукопашного бою (прикладні рухові навички з рукопашного бою). Для характеристики вольових якостей під час занять різними видами рухової активності було здійснено тестування курсантів за 5 методиками, які дозволили оцінити 7 показників вольових якостей: методика «Дослідження сили волі» (показник 1 – рівень сили волі); методика «Дослідження імпульсивності» (показник 2 – рівень імпульсивності); методика «Дослідження вольової саморегуляції» (показники 3, 4, 5 – рівень вольової саморегуляції, рівень наполегливості, рівень самоконтролю); методика «Самооцінювання терпіння» (показник 6 – рівень терпіння); методика «Дослідження локусу суб'єктивного контролю» (показник 7 – рівень суб'єктивного контролю).

Результати. Проведені дослідження свідчать, що усі вольові якості мають достовірний зв'язок різного ступеня з рівнем розвитку рухових якостей курсантів. Високу і середню кореляцію рівня розвитку більшості вольових якостей курсантів усіх трьох груп було виявлено із показниками розвитку витривалості та прикладними руховими навичками з рукопашного бою та прискореного пересування зі зброєю. Найвищі коефіцієнти кореляції між рівнем розвитку рухових та вольових якостей виявлено у групах курсантів, які додатково займалися спортом: рукопашним боєм та іншими видами.

Висновки. Результати проведеного дослідження дозволяють стверджувати про високу ефективність додаткових занять фізичними вправами і спортом, особливо рукопашним боєм, для розвитку як рухових, так і вольових якостей майбутніх правоохоронців, що, в цілому, сприятиме виконанню специфічних завдань їх майбутньої професійної діяльності.

Ключові слова: рухові якості, вольові якості, рукопашний бій, курсанти, рухова активність.

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