

## THE INFLUENCE OF SPECIAL ACROBATIC CLASSES ON THE EXPRESSION LEVELS OF SUSTAINABILITY OF THE VESTIBULAR ANALYZER OF YOUNG 6-8 YEAR-OLD ALL-ROUND FIGHTERS ATTENDING BASIC TRAINING GROUPS

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**Annotation:** *Purpose:* to increase the level of manifestation sustainability of the vestibular analyzer young fighters-all-rounders aged 6-8 years in initial training through a shift from the technical and tactical training in the direction of general physical and acrobatic. The research task was to prove the effectiveness of training, aimed at special acrobatic training at the level of the manifestation of stability of the vestibular analyzer young fighters-all-rounders aged 6-8 years who are engaged in military-sports-around in initial training. *Material:* the research has been done at the premises of the Kirovograd Federation of military and sports all-rounders. It covered 40 young sportsmen divided into two groups of 20 persons each: an experimental and control group. The research was conducted during the two years engaging steady student population. *Results:* it is established that after the execution of the experimental training program most likely changes were observed among the indicators vestibular illusions against rotation (VIAR) (43.3 %), after performing traditional training programs respectively to 10.6 %; less noticeable changes among the indicators heart rate and eyes nystagmus (2,6%, 1,62% and 0,4%). *Conclusions:* shifting focus from technical and tactical training in the direction of the general physical and acrobatic increase the level of manifestation of the stability of the vestibular young fighters all-rounders aged 6-8 years.

**Key words:** stability, vestibular, analyzer, young, fighters, military, sports, all-rounders.

### Introduction

While ensuring traffic one of the main systems of the analyzers is the vestibular system. A.N. Laputin, V.A. Kashuba [8] thought that the vestibular apparatus of central gravitational centre of the man. His perceptions on the quality of managerial decisions when building movements and realization of all the vital programs motive of action and the optimal level of autonomic response [13].

The role of the vestibular function in human physiology revealed in defining the values of vestibular training for the performance of different sports [4, 7, 11]. Vestibular training - system of special exercises aimed at improving the sustainability of the vestibular analyzer to the effects of stimuli associated with active and passive movements in expanse.

The analysis of scientific and methodological literature showed [1, 3] that the problem of determining the stability of the vestibular and dynamics of its development in children of younger school age in specialized groups on military-sports all-rounder was not carried out fundamental scientific research. But some aspects of the stability of the vestibular analyzer concerned in their works a several researchers.

Creative for theoretical justification for the stability of the vestibular system, can be considered according to Vavilov U.N. [5], who notes that the motion - an important component of exercise is a natural stimulus of the vestibular system. Therefore, the exercise of the functions of the vestibular analyzer sustainability with the help of physical exercises, especially those related to balance body and rotational movements, lowers the threshold vestibular sensitivity and increases the organism resistance to rotational stress and sickness [5].

The results show that the use exercises of acrobatic direction allow for adequate development of resistance vestibular apparatus of children of younger school age [3]. Adequate irritation of the vestibular apparatus does not restrict movement capabilities of children, and expands and increases their [6].

Dynamics of increasing resistance of the vestibular analyzer in children 7 to 17 years is stages: the most intensive increase stability is held in pre-pubertal period [10]. Therefore, the formation statokinetic sustainability should be carried out exactly in childhood. Targeted increase statokinetic sustainability beginning sportsmen the growth of their sports skills.

Positive impact workout to increase statokinetic sustainability noticed many authors [2, 9].

In sports activities, especially in the military-sports all-rounder, the main role of motor activity, the effectiveness of which is determined by the accuracy of the spatial orientation depending on the functioning of the vestibular apparatus [9,12]. Therefore, the improvement of vestibulometric functions is important for fighters all-rounders.

The work is performed in accordance with the complex plan of the research work of the Kirovograd state pedagogical University named after Volodymyr Vynnychenko.

### Purpose, tasks of the work, material and methods

*Purpose:* to increase the level of manifestation sustainability of the vestibular analyzer young fighters all-rounders aged 6-8 years in initial training through a shift from the technical and tactical training in the direction of general physical and acrobatic.

*Objective:* to prove the effectiveness of training, aimed at special acrobatic training at the level of the manifestation of stability of the vestibular analyzer young fighters all-rounders aged 6-8 years who are engaged the military-sports all-rounder in initial training.

*Material and methods.* At the beginning of the experiment, both groups were relatively homogeneous level of manifestation sustainability of the vestibular analyzer and quantitatively (n=20).

The levels of manifestation of sustainability of the vestibular analyzer young sportsmen were determined in the formation of the initial training in the month of September with children aged 6 years. Following testing conducted in the month of may after two years of training.

The basis of the functional samples were taken types of testing, characterizing the manifestation of the sustainability of the vestibular analyzer, and in particular: vestibular illusion against rotation (VIA), eyes nystagmus, influence of rotational stress on heart rate(HR) and test of Jarocki.

Pedagogical experiment lasted for two years. Classes with young fighters 6-8 years was conducted 3 times a week for 9 months of every year. The main emphasis in the control group was aimed at technical and General physical training, and in the experimental group on the General physical and acrobatic training [6].

### Results of the researches

Pedagogical experiment results are presented in tables 1 and 2. Table 1 presents the results of stability of the dynamics of the vestibular apparatus of young athletes experimental group and in table 2 under control.

Table 1.

*Dynamics of indicators of sustainability of the vestibular analyzer young fighters all-rounders aged 6-8 years involved in military-sports all around the experimental program (the experimental group, n=20).*

№	Tests	At the beginning of the experiment	At the end of the experiment	ΔX	P
		X ± σ, V	X ± σ, V		
1.	VIA, c	33,06±2,5 7,76	18,8±4,7 25,39	14,3	<0,05
2.	Eyes nystagmus, c	45,5±2,01 4,43	38,8±2,24 5,79	6,7	<0,05
3.	HR, beats. min-1	106,0±8,43 7,95	87,0±2,3 2,63	19,0	<0,05
4.	Test of Jarocki, c	23,68±8,44 36,53	19,5±1,23 6,33	-4,2	<0,05

Table 2.

*Dynamics of indicators of sustainability of the vestibular analyzer young fighters all-rounders aged 6-8 years involved in military-sports all around the traditional program (control group, n=20).*

№	Tests	At the beginning of the experiment	At the end of the experiment	ΔX	P
		X ± σ, V	X ± σ, V		
1.	VIA, c	38,5±2,6 6,75	34,4±2,1 6,12	4,1	<0,05
2.	Eyes nystagmus, c	46,5±2,42 5,22	45,3±2,76 6,1	1,2	>0,05
3.	HR, beats. min-1	105,0±8,96 8,53	105,4±8,68 8,23	-0,4	>0,05
4.	Test of Jarocki, c	25,24±2,4 9,52	25,65±2,23 8,72	0,41	>0,05

The analysis of dynamics of indicators of sustainability of the vestibular analyzer in the experimental group showed a positive trend of change in the majority of indicators the young fighters -all-rounders aged 6-8 years. The only exception here is the sample Jarocki, where we experienced a deterioration of the results. For all registered us indices were observed significant changes in the level of manifestation sustainability of the vestibular analyzer (P<0.05).

After the execution of the experimental training program the most significant changes were observed on the index vestibular illusions against rotation (VIA) (43,3%). Less noticeable changes were observed in terms of heart rate and eyes movement (17,9% and 14.7%, respectively).

The analysis of dynamics of indicators of sustainability of the vestibular analyzer in the control group showed a positive trend of change in young fighters-all-rounders aged 6-8 years for all registered us indicators. However, only in terms of the VIA observed significant changes in the level of manifestation sustainability of the vestibular analyzer (P<0.05), all other indicators are significant change.

After performing the traditional training program the most significant changes were observed on indicators vestibular illusions against rotation (VIA). We have observed improve them respectively by 10.6%. Almost no noticeable change was observed in the indicators of the eyes movement, test of Jarocki and HR (2,6%, 1.62% and 0.4%, respectively).

### Conclusions.

Comparative analysis of dynamics of changes of level of manifestation of the stability of the vestibular young fighters-all-rounders aged 6-8 years involved in military-sports-around in initial training allows to draw the following conclusions: first, proved the effectiveness of training, aimed at special acrobatic training, to improve the stability of the vestibular; secondly, determined the growth rate indicators of the stability of the vestibular; it is established that shifting focus from technical and tactical training in the direction of the general physical and acrobatic increase the level of manifestation of the stability of the vestibular young fighters all-rounders aged 6-8 years.

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