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METHODOLOGICAL JOURNAL**<http://mentaljournal-jspu.uz/index.php/mesmj/index>**DYNAMICS OF MANIFESTATION OF A NUMBER OF  
PARAMETERS OF LOPSIDED THROWS OF A DUMMY THROUGH THE CHEST  
AMONG WRESTLERS UNDER NORMAL CONDITIONS AND AGAINST THE  
BACKGROUND OF THE AFTEREFFECT OF VESTIBULOKINETIC LOAD***Alisher Ashurovich Tilakov**Jizzakh State Pedagogical University**Jizzakh, Uzbekistan**E-mail: [tilakov@mail.ru](mailto:tilakov@mail.ru)***ABOUT ARTICLE**

**Key words:** belt wrestlers, throws, volume, intensity, asymmetry, vestibulokinetic load.

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**Abstract:** The article analyzes the results of a study devoted to the study of the influence of vestibulokinetic load on the indicators of dummy throws to the left (convenient side for right-sided throws) and the right side with subsequent asymmetry of their manifestation.

**INTRODUCTION**

**The relevance of research.** In types of sports wrestling, the free and purposeful movement of a wrestler's hands is the leading factor determining the effectiveness of the implementation of the opponent's planned throw technique during fights with the rational use of the most advantageous options for technical, tactical and physical capabilities. And in belt wrestling, where the opponents' fight takes place in conditions of constant hands being busy with a grip on the belt, the above-mentioned possibility is extremely limited [R.F. Gaidanov, 2008, pp. 63-95; V.T. Davletshin, 2005; S.V. Ulyankin, 2010, p.3-36; N.N.Chelshev, 2013, p.191-196]. In addition, it is assumed that repeated mutual forceful or explosive movements, turns and rotations carried out in this type of wrestling either in a supporting position or in an unsupported position of one of the opponents, acting on the receptors of the vestibular apparatus, can cause a state of motion sickness, accompanied by loss of balance and discoordination of motor acts [V.I. Lyakh, 2006, pp. 133-143; A.S. Nazarenko, A.S. Chinkin, 2015, pp. 78-85].

The purpose of the study is to study the dynamics of the manifestation of the volume and intensity of lopsided dummy throws through the chest of wrestlers under normal conditions and against the background of the aftereffect of a short-term vestibulokinetic load.

## MATERIALS AND METHODS

**Organization and methods of research.** Qualified wrestlers of the 68-73 kg weight category, studying at the Uzbek State University of Physical Culture and Sports, were involved in the study. The number of wrestlers was 23 people, who were examined twice at the beginning and at the end of the school year. The following methodological tests were used in the studies:

- the duration of a 10-fold throw of the dummy across the chest to the left (convenient side for right-handed throws) side;
- the same - to the right inconvenient side;
- determination of the maximum volume of dummy throws through the chest in 10 seconds. to the left;
- the same - to the right side;
- all these types of throws were studied under the conditions of the aftereffect of 15-fold rotation of the body in a pose of tilting the body forward by 90°.

The studies were carried out at the beginning and at the end of the 2021-2022 academic and training year after an appropriate warm-up for each lesson (8+8 lessons).

## RESULTS AND DISCUSSIONS

The results of the study showed that among the examined belt wrestlers, the duration (intensity) of 10-fold dummy throws to the left at the beginning of the school year was  $35.7 \pm 3.57$  seconds, and at the end -  $34.3 \pm 3.38$  seconds. or the throw time difference was reduced by 1.4 seconds. (Table 1).

The duration of this number of throws to the right at the beginning was  $41.3 \pm 3.12$  seconds, and at the end it was  $39.5 \pm 2.77$  seconds. Throwing time has been reduced by 1.8 seconds. It can be seen that the asymmetric difference in time throws is significant, or rather it was equal to 5.6 seconds at the beginning, and 5.3 seconds at the end. or improved by 0.3 sec. The number of throws of the dummy through the chest to the left in 10 seconds. by the beginning of the school year it was  $5.8 \pm 0.79$  times, at the end it improved by 0.3 times or amounted to  $5.5 \pm 0.71$  times. The number of dummy throws to the right at the beginning of the school year decreased to  $4.4 \pm 0.42$  times, and by the end of the school year it decreased by 0.4 times or amounted to  $4.0 \pm 0.38$  times. The asymmetry in the number of throws at the beginning was 1.4 times, at the end – 1.5 times. From the above data it is clear that the time indicators of 10-fold throws of the dummy to the right are distinguished by a pronounced lengthening both at the beginning and at the end of the school year when comparing the corresponding values of throws of the dummy across the chest to the left and in the convenient direction.

**Table 1**

**Dynamics of changes in the indicators of dummy throws through the chest to the left and right of qualified wrestlers during the training year –  $n=23 \times 2=46$  ( $\bar{X} \pm \sigma$ )**

Tests	At the beginning of the training year	At the end of the training year	Difference in indicator changes
Duration of 10x dummy throw to the left (sec.)	35,7±3,57	34,3±3,38	+1,4
Same thing - to the right	41,3±3,12	39,5±2,77	+1,8
The number of dummy throws to the left in 10 seconds. (quantity)	5,8±0,79	5,5±0,71	-0,3
Same thing - to the right	4,4±0,42	4,0±0,38	-0,4

*Note: - the weight of the mannequin is 40 kg.*

The same negative trend was observed according to the quantitative parameters of throwing the dummy in an inconvenient direction. During visual observation of the progress of throwing a dummy through the chest in an inconvenient direction, a deterioration in the technique of their implementation was clearly visible, which draws attention to the advisability of practicing throwing techniques during training with an emphasis on the symmetry of their implementation. In this context, it is of particular interest to study the question of the degree of influence of multidirectional and multiplanar rotational movements on the main parameters (technique, volume and intensity of throws) of throwing techniques. Studies conducted in this aspect have shown that even artificially presented short-term intense rotational movements of the wrestler's body in the position of bending the body forward by 90° have a pronounced negative effect on the volume and intensity of the dummy's throws both to the left and to the right.

For example, the duration of a 10-fold throw of a dummy through the chest to the left against the backdrop of the aftereffect of body rotation in a pose of tilting the torso forward by 90° at the beginning of the school year was  $40.9 \pm 4.12$  seconds, which is 5.2 seconds. greater than the value recorded at the moment the dummy threw the dummy to the left for a while (Table 2). And at the end of the school year, the duration of the throw to the left decreased by an insignificant amount and amounted to  $39.5 \pm 3.76$  seconds, which is also 5.2 seconds. greater than the value noted during throws under normal conditions (see Table 1). The duration of a 10-fold throw of a dummy to the right (in the inconvenient side) under conditions of aftereffect of a rotational load at the beginning of the school year turned out to be  $45.2 \pm 4.88$  seconds, and at the end it was  $43.7 \pm 4.52$  seconds. or the time of throws in this case was reduced by 1.5 seconds.

Maximum number of dummy throws in 10 seconds. to the left against the background of the aftereffect of the rotational load at the beginning of the school year was  $4.7 \pm 0.45$  times, at the end -  $4.9 \pm 0.48$  times, or it increased by only 0.2 times.

**Table 2**

**Dynamics of changes in the indicators of dummy throws through the chest to the left and right under conditions of aftereffect of rotational load by the end of the training year –  
n=23x2-46 ( $\pm\sigma$ )**

Tests	At the beginning of the training year	At the end of the training year	Difference in indicator changes
Duration of a 10-fold dummy throw to the left against the background of the aftereffect of a rotational load (sec.)	40,9 $\pm$ 4,12	39,5 $\pm$ 3,76	+1,4
Same thing - to the right	45,2 $\pm$ 4,88	43,7 $\pm$ 4,52	+1,5
The number of dummy throws to the left in 10 seconds. against the background of aftereffect of rotational load (sec.)	4,7 $\pm$ 0,45	4,9 $\pm$ 0,48	+0,2
Same thing - to the right	3,5 $\pm$ 0,37	3,8 $\pm$ 0,39	+0,3

These indicators turned out to be 0.9 and 0.6 times less than the values registered during throws to the left under normal conditions.

Maximum number of dummy throws to the right in 10 seconds. against the background of the aftereffect of the rotational load, it was characterized by a significant decrease both at the beginning and at the end of the school year and amounted to  $3.5 \pm 0.37$  and  $3.8 \pm 0.39$  times, respectively. It can be seen that in this case, too, there is an asymmetric difference between the time and quantitative indicators of the dummy's throws in both the comfortable and inconvenient directions, which almost remains until the end of the training year.

### CONCLUSION

From the above analysis of the research results, we can summarize the following: firstly, and this is the main thing, the temporary values of the dummy throws through the chest both to the left and to the right, obtained under conditions of aftereffect of the rotational load, are significantly lengthened, and the quantitative ones are reduced, which indicates insufficient development functions of the vestibular apparatus. This points to the need for the combined use of specialized and vestibulokinetic exercises in training sessions; secondly, in the examined wrestlers, in all cases of performing throws to the left and right, a clear asymmetry is observed on the belts, which allows us to focus on the need to systematically improve the technique, volume and intensity of the opponent's throws in an inconvenient direction, which will achieve a certain expansion of the composition of the wrestlers' tactical actions. However, the presented research results cannot give an unambiguous

answer to the problems put forward and therefore it should be considered useful to continue these studies with a detailed study of the influence of vestibulokinetic loads on the leading parameters of all methods of throwing in both the comfortable and inconvenient direction.

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