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ANALYSIS OF THE INFLUENCE OF THE LEVEL OF DEVELOPMENT OF GYMNASTS' MOTOR ABILITIES ON THE SUCCESS OF MASTERING BASIC SKILLS

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Abstract: The article addresses the issues of the influence of the motor abilities of gymnasts of training groups on technical readiness, which is assessed by the results of the implementation of programs in conditions of competitive activity and the ability to demonstrate the technique of competitive exercises.

Keywords: physical readiness, motor abilities, basic skill, technical element, competitive activity.

АНАЛИЗ ВЛИЯНИЯ УРОВНЯ РАЗВИТИЯ ДВИГАТЕЛЬНЫХ СПОСОБНОСТЕЙ ГИМНАСТОК НА УСПЕШНОСТЬ ОВЛАДЕНИЯ ОСНОВНЫМИ НАВЫКАМИ

Аннотация. Статья затрагивает вопросы влияния двигательных способностей гимнастов учебно-тренировочных групп на техническую подготовленность, которая оценивается по результатам выполнения программ в условиях соревновательной деятельности и способности демонстрировать технику конкурентоспособных упражнений.

Ключевые слова: физическая готовность, двигательные способности, базовый навык, технический элемент, соревновательная деятельность.

INTRODUCTION

Considering that physical readiness to master technical elements is fundamental in mastering basic training in gymnastics, an assessment of the preparedness of gymnasts involved in children's and youth sports school (the most common system of sports training) was carried out. On the basis of the SChYSS in gymnastic sports of the city of Tashkent, two groups of students were created, each of which included 12 gymnasts of the training stage, who are homogeneous in age and sports qualifications.

The content of the tests (pedagogical testing) took into account the model characteristics of high-class gymnasts, control and translation standards and classification programs [1].

The control exercises involved assessing the development of the gymnast's basic qualities (strength, speed, flexibility, special endurance) through a point system that allowed comparing the athletes' fitness according to the listed criteria [2].

As a result of the conducted testing of the subjects, low indicators of physical fitness were recorded and significant shortcomings in sports training were revealed. At the same time, significant differences were recorded between the groups only in the exercises: "long jump from a place" and "circles with two on a horse on handles" ($p<0,05$). The remaining indicators of athletes in the control and experimental groups did not have significant differences ($p>0,05$): the absolute values in the groups of subjects differed slightly, but when translating the results into a point system, the groups had the same physical fitness (figure 1).

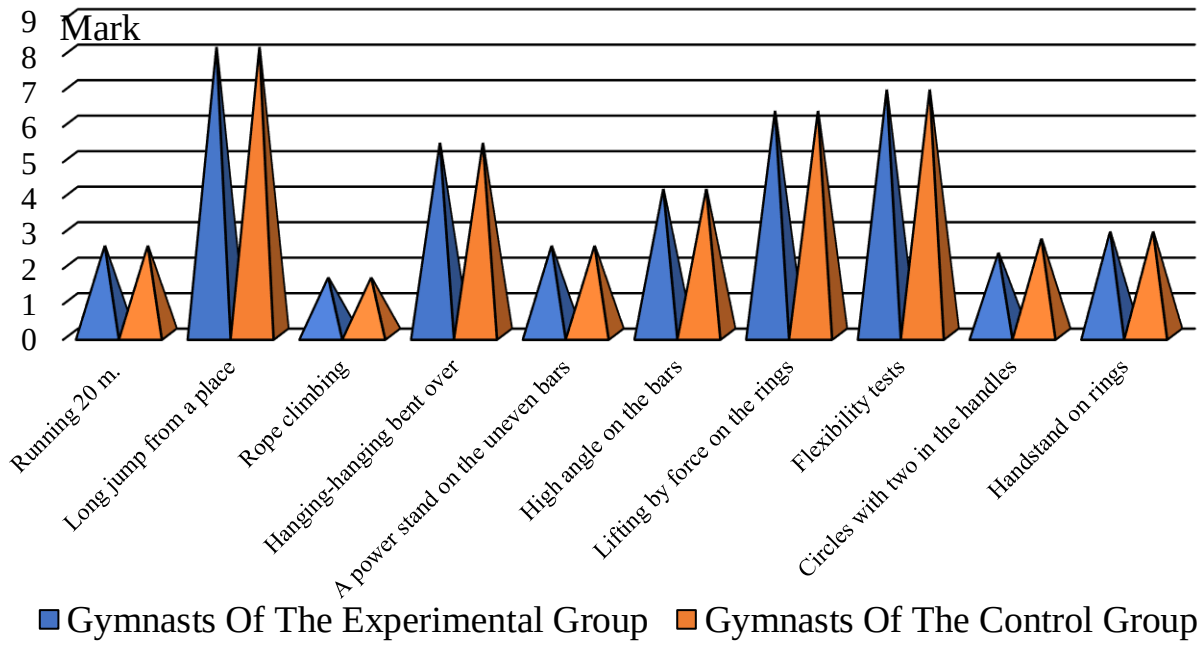

Figure 1. The results of the gymnasts' physical fitness. control (n=12) and experimental groups (n=12) at the beginning of the pedagogical experiment (points)

That is, all gymnasts of the training stage, engaged in the same program defined by the normative documents of the educational institution, had equal readiness to master basic exercises. The gymnasts demonstrated the highest results in the long jump from a standing position and in control exercises to assess flexibility (8.1±2.0 points and 6.9±1.9 points, respectively).

The indicators for lifting by force on the rings are slightly lower (M ± m = 6.3 ± 0.3 points). Below average, gymnasts received marks for performing a high angle stop on parallel bars (M±m = 4.1±0.5 points).

Very low indicators in both groups are the results recorded in the control exercises "running at 20 m", "climbing a rope 4 m for a time", "standing by force bent on parallel bars ("matchag")", as well as in a special endurance exercise (two laps on a horse). Considering that speed-strength qualities are of paramount importance for mastering the basic elements at the training stage of training in gymnastics [4], a correlation analysis was carried out to determine the degree of influence of these abilities on the technical preparedness of gymnasts. It has been established (Table 1) that the effectiveness of performing individual control exercises to assess speed and strength abilities is not closely related to the quality of mastering basic skills [3].

Table 1. The relationship between the indicators of speed, strength and technical readiness of gymnasts of the training stage of sports training (n=24)

№	Control exercises	Basic technical actions			
		Handstand	Pushing away with your hands	Kicking off	Turning in a handstand
1	Running 20 m (s)			-0,2	

2	Shuttle run 2 x10 (s)			-0,3	
3	Rope climbing 4 m (s)	-0,6	-0,3		-0,3
4	Long jump from a standing position (cm)			0,3	
5	Abalakov's jump (cm)			0,2	
6	Lying on your back - sitting bent over "pike" (number)	0,7	0,1	-0,1	0,5
7	Flexion - extension of the arms with emphasis on the bars in 10 seconds (number)	0,8	0,4	0,04	0,6

Thus, the effectiveness of rope climbing has a negative impact on the quality of performance: handstands, handstand turns and hand pushing. That is, the excessive development of the speed and strength abilities of the flexors of the arms negatively affects the work of the extensor muscles, and, therefore, it is not advisable to combine these motor actions in one training session. On the contrary, the ability to quickly and repeatedly perform flexion-extensor movements with hands with an emphasis on extension has a positive effect on rack training and the quality of performing handstands.

The maximum (not optimal) run-up speed has a negative effect on the quality of the kick-off, since, according to the technique, it should not occur due to the work of the thigh muscles with the inclusion of the shin muscles, but only due to the muscles that provide extension in the ankle joint.

The speed and strength training of the muscles of the trunk has a positive effect on the formation of a muscular "corset", dynamic posture and, as a result, the effectiveness of rack training.

Thus, the correlation analysis showed a different degree of correlation between the developed speed-strength abilities of muscles (of different anatomical localization) and the quality of mastering the technique of basic skills, which indicates the need and possibility of correcting the content of speed-strength training of gymnasts of the training stage of training. It should be borne in mind that most of all the speed and strength training of the arms and body affects the performance of the exercises "handstand" and turns in the handstand ($g = 0.8$ and $r = 0.6$, respectively). The influence of the force of flexion and extensor movements of the arms in the emphasis on the bars on the repulsion with the hands is below average ($r = 0.4$). And the speed of rope climbing has a negative transfer to the technique of mastering the handstand ($r = -0.6$).

CONCLUSION

The data obtained showed that physical fitness is extremely important in the training of a gymnast. However, the effectiveness of sports and, in particular, technical training is assessed by the results of the implementation of programs in conditions of competitive activity, by the ability of a gymnast to demonstrate the technique of competitive exercises, optimally demonstrating qualities and abilities.

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