

USE OF ACROBATIC EXERCISES IN READINESS FORMATION OF YOUNG HANDBALL PLAYERS FOR COMPETITIONS

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Abstract

The article deals with the feasibility and effectiveness of acrobatic exercises in training sessions for young handballers in preparations. In terms of increasing the density of the game, increasing the combat power on the ground, implementation of complex technical elements in modern handball topical issues including the structure of the training process of exercise that will help speed development, coordination, and promote the education of children volitional qualities.

The offered method of the use of acrobatic exercises is in trainings employments. For verification of efficiency of application of acrobatic exercises and with the purpose of determination of changes in the indexes of physical and technical preparedness the young handballers of investigational groups had the conducted testing. A pedagogical experiment confirmed efficiency of application of method of the use of acrobatic exercises in trainings employments of young handballers.

Key words: acrobatics, physical readiness, technical readiness, young handball players.

Юрій Цюпак, Олександр Швай, Леонід Гнітецький, Андрій Ковальчук. Використання акробатичних вправ у формуванні готовності юних гандболістів до змагань. У статті розглянуто питання доцільності та ефективності використання акробатичних вправ у тренувальних заняттях юних гандболістів у підготовчому періоді. В умовах підвищення щільності гри, збільшення силових єдиноборств на майданчику, виконання складних технічних елементів у сучасному гандболі є актуальним питання включення в структуру тренувального процесу фізичних вправ, які сприятимуть розвитку швидкості, координації, а також вихованню в дітей волевих якостей.

Запропонована методика використання акробатичних вправ у тренувальних заняттях. Для перевірки ефективності використання акробатичних вправ та для визначення зрушень у показниках фізичної й технічної підготовленості в юних гандболістів досліджених груп проведено тестування. Педагогічний експеримент підтвердив ефективність застосування методики використання акробатичних вправ у тренувальних заняттях юних гандболістів.

Ключеві слова: акробатичні вправи, фізична підготовленість, технічна підготовленість, юні гандболісти.

Юрий Цюпак, Александр Швай, Леонид Гнитецкий, Андрей Ковальчук. Использование акробатических упражнений в формировании готовности юных гандболистов к соревнованиям. В статье рассматривается вопрос целесообразности и эффективности использования акробатических упражнений в тренировочных занятиях юных гандболистов в подготовительном периоде. В условиях увеличения плотности игры, увеличения силовых единоборств на площадке, выполнения сложных технических элементов в современном гандболе актуален вопрос включения в структуру тренировочного процесса физических упражнений, которые будут способствовать развитию скорости, координации, а также воспитанию у детей волевых качеств.

Предлагается методика использования акробатических упражнений в тренировочных занятиях. Для проверки эффективности применения акробатических упражнений и с целью определения сдвигов в показателях физической и технической подготовленности у юных гандболистов исследованных групп проводили тестирование. Педагогический эксперимент подтвердил эффективность применения методики использования акробатических упражнений в тренировочных занятиях юных гандболистов.

Ключевые слова: акробатические упражнения, физическая подготовленность, техническая подготовленность, юные гандболисты.

Introduction. Sports practice shows that the increase of level of sporting trade of handballers depends on systematic and qualified mass studies the game of children, beginning from early age. Only the correct and reasonable use of the most effective methods of teaching and training, taking into account patterns of the age of the systems, make it possible to fully solve the task of preparing high-class handball. The primary purpose of sporting preparation of

handballers is achievement of maximally possible level of tactical, technical, physical and psychological training, handball due to specific requirements and achieve the highest results in competitive activities [2; 5].

In our time the leading specialists of sport critically behave to the mechanical increase of volume of loading as to the method of increase of training efficiency. The constant increase of this index every year makes less and less impact on the growth of sports results. Consequently, necessary orientation on other ways of increase of efficiency educational-training to the process of skilled sportsmen. These areas include:

1. Specification of the total volume of training loads, depending on the intensity and physiological orientation;
2. Optimization of correlation of loadings of different orientation;
3. Improving the organizational basis of training so that you can provide the optimal conditions for full implementation of an athlete's adaptive capacity on the basis of a rational relationship between the spending and the restoration of its energy resources and psychological stability;
4. Rationalize the structure of the training process

In addition, many scientists unanimous in that one of the most perspective directions of increase of efficiency educational-training there is that the process of skilled sportsmen, in basis of which there is the stopped up account of accordance of individual possibilities of sportsman the offered loadings and requirements [3; 4].

In the conditions of increase of closeness of game, its speed, increase of power single combats, on a ground, implementation of difficult technical elements in a modern handball is actual question of plugging in the structure of training process of physical exercises, which will assist speeding up, co-ordination, and also to educate volitional qualities for children.

The Aim of the Work is determining of expedience and efficiency of the use of acrobatic exercises in trainings employments of young handballers, their influence on physical and technical preparation and exposure of reaction of young handballers on employment with the use of acrobatic exercises.

Research Results. Discussion. Due to the peculiarities of the chosen sport, sportsmen have different leading qualities, different level of their development and correlation. Thus the difference of structure and maintenance of physical preparedness depends on the requirements of contention activity. Thus, it is needed strictly to take into account the features of every type of sport at the choice of facilities and methods SPP [5].

In modern handball in connection with changes in the rules of the game, increasing the intensity of the game to players of different line of roles identically in relation to them physical preparedness. Therefore, along with improvement of technical and tactical to trade of handballers, by an important task educational-training there is an increase of level of physical preparedness of sportsmen a process. This is one of the urgent problems of modern handball. High technical preparedness and modern tactics based on strong physical fitness – the success of performance of the team in responsible competitions [1; 3].

For effective development of physical possibilities of handballers it is necessary to know what requirements belong before the separate functions of organism and physical qualities of sportsmen a game; on physical quality in the first place should pay attention during training; that the means and methods of training are most effective for the development of certain physical qualities; how to effectively distribute the tools and training methods at various stages of preparation [2; 4; 5].

The study involved 36 young handballers, engaged in teaching and training groups in the third year of study.

For the pedagogical experiment 2 groups were formed of athletes 12–13 years: control – 18 persons; an experimental group – 18 people. The people of which studied behaved to the basic medical group, the state of their health was controlled twice on a year in an area to athletic–medical dispensary. At the time of the survey, they had no complaints on the health and well-being. Each training session for young handball experimental group was given a set of acrobatic exercises in accordance with the tasks of training. Employment in a control group was conducted on the generally accepted program.

For the study of physical preparedness of young handballers, which get busy in educational-trainings groups of the third year of studies, used tests, which the most essential motive qualities of handballers – agility, speed, strength, endurance, coordination abilities.

The level of explosive force was determined using the test «long jump from their seats.» It is set as a result of testing, that the young handballers of experimental and control groups have a level of muscular force at middle level. Thus, the average length of the jump seats in the experimental group of young handball are $232,5 \pm 5,5$ cm in the control group of young handball – $228,0 \pm 3,0$ cm ($P > 0,05$).

The level of speed qualities determined by a test «run 50 meters.» According to table 1, we found no reliable difference ($P > 0,05$) in speed training. Therefore, averages at run on 50 m, for the young handballers of experimental group, make $7,4 \pm 0,4$ s, for the handballers of control group, make $7,5 \pm 0,5$ s. Level them speed preparation estimated as sufficient, that specifies on the optimum level of work in this direction.

In the work we probed general endurance as motive quality of man – to execute ability muscular work of moderate intensity, by a test at «run 1000 meters.» As can be seen from Table. 1, the control group athletes overcome the distance of 1000 m at an average $3,55 \pm 0,16$ min., Young handball experimental group by $4,09 \pm 0,28$ min.

The level of development of force was determined as a result of test by raising of trunk from position, lying (30 s). The handballers of experimental group on the average executed for this time 29 ± 1 times, control group – 27 ± 2 times. It

is possible to draw conclusion from findings of test, that a trainer does not spare sufficient attention of development of force of young sportsmen.

The best results were obtained by us as a result of agility testing students using the «shuttle run (4 × 10 m)». The average score in this norm in the experimental group was $9,5 \pm 0,2$ s, and in the control group – $9,7 \pm 0,4$ s ($P > 0,05$). These information testify to the sufficient level of development of adroitness for the handballers of both groups.

As evidently from a table 2, the young handballers of experimental group ran about 20 m codes with the conduct of ball after $5,8 \pm 0,4$ s, and handballers of control group accordingly after $6,1 \pm 0,3$ s. Middle indexes of test a «throw on distance» for the handballers of experimental group made $32,5 \pm 1,5$ m codes and $30,5 \pm 2,0$ m – for the young handballers of control group. Test a meter penalty throw» made «7th $4,0 \pm 0,2$ times for the young handballers of experimental group and $3,9 \pm 0,2$ times for the young handballers of control group. At comparison of results of testing from the special physical and technical preparedness of young handballers of experimental and control group it is not discovered by us reliable difference between these indexes.

Middle level was coordinating capabilities of young handballers (tab. 3). Thus, the average in the experimental group in the preparation of test «run of slalom dribbling» were $12,8 \pm 0,3$ sec and $13,2 \pm 0,5$ sec in the control group.

To test the efficacy of acrobatic exercises and to assess progress in terms of physical and technical preparedness of young handball, we conducted a retest.

Results are resulted in a table. 1 and 2 show that the indexes of physical and technical preparedness became better both in experimental and in control, groups. However in an experimental group indexes appeared higher, than in control. According to Table. 1 in the experimental group of young handballers most improved results with the physical fitness of the following standards: shuttle run, long jump from their seats and lifting the torso from a prone position. Thus, children who were in the experimental group at the end of the experiment, the performance norm a standing broad jump was improved result on 17 see, ran back distance 4×10 m on 0,5 secs. quick than at the beginning of research and executed the norm of raising of trunk from position, lying $33 \pm 1,04$ times.. Young handball control group at the end of the experiment improved their results in accordance with jump seats with only 10 cm × 4 ran a distance of 10 m by 9,6 sec. and constituted power test result of $29 \pm 1,99$ times. In other norms it was not observed from physical preparation of the special changes.

Table 1

The Indexes of Physical preparedness of Young Handballers

Indexes	Beginning Research		End of Research		Reliability of Difference, P
	x	m _x	X	m _x	
1	2	3	4	5	6
The Experimental Group					
Running 50 m	7,4	0,13	7,4	0,13	> 0,05
Shuttle run	9,5	0,27	9,0	0,23	< 0,05
Lifting the body of prone position	29	1,11	33	1,04	< 0,05
Long jump from place	232,5	2,61	249,0	2,47	< 0,05
Running 1000 m	4,35	0,22	4,34	0,21	> 0,05
The Control Group					
Running 50 m	7,5	0,16	7,6	0,16	> 0,05
Shuttle run	9,7	0,31	9,6	0,23	> 0,05
Lifting the body of prone position	27	2,08	29	1,99	> 0,05
Long jump from place	229,0	2,82	239,0	2,56	< 0,05
Running 1000 m	4,48	0,22	4,48	0,22	> 0,05

We look after a similar picture at the analysis of indexes from technical preparedness (table 2). For the handballers of experimental group most the indexes of norms became better 7th meter penalty throw (in 0,4) and conduct of ball (0,4 s). Unfortunately, «Throw on distance» of the special changes did not test the results of test.

At the same time the proper indexes for the children of control group remained almost without changes. The young handballers of control group at the end of experiment accordingly improved the results of norms 7th meter penalty throw and conduct of ball accordingly on 0,05 and 0,1 s.

Table 2

Indicators of Technical Preparedness of Young Handball

Indexes	Beginning Research		End of Research		Reliability of Difference, <i>P</i>
	<i>x</i>	<i>m_x</i>	<i>x</i>	<i>m_x</i>	
<i>The Experimental Group</i>					
7-meter free throw in the upper corners	3,8	0,14	4,2	0,11	< 0,05
Dribbling maximum speed at a distance of 20 m	5,8	1,05	5,4	0,97	< 0,05
Throw the ball at a distance of 2,5 m wide corridor with a running start in the reference position	32,5	1,48	33,0	1,46	>0,05
<i>The Control Group</i>					
7-meter free throw in the upper corners	3,9	0,19	3,95	0,19	>0,05
Dribbling maximum speed at a distance of 20 m	6,1	1,29	6,0	1,21	>0,05
Throw the ball at a distance of 2,5 m wide corridor with a running start in the reference position	30,5	2,07	30,55	20,7	>0,05

Information some other character we got analysing the results of test from co-ordinating preparation (table 3). For the handballers of experimental group the indexes of speed reaction became better most, that was in same queue represented in diminishing of time which was outlaid by handballers on drafting of test.

Table 3

Indicators Coordinating Preparedness of Young Handball

Indexes	Beginning Research		End of Research		Reliability of Difference, <i>P</i>
	<i>x</i>	<i>m_x</i>	<i>x</i>	<i>m_x</i>	
<i>The Experimental Group</i>					
Slalom run of dribbling	12,8	1,54	12,1	1,36	< 0,05
<i>The Control Group</i>					
Slalom run of dribbling	13,2	1,69	13,1	1,65	>0,05

With the purpose of determination of reaction of sportsmen on reading with the complexes of acrobatic exercises, at the end of experiment, we conducted the verbal questioning, the results of which rotined that handballers in swingeing majority understood the values of application of acrobatic exercises in a training process and gladly execute them. At the same time, it is discovered by us, that young sportsmen in an insufficient measure pay regard to implementation of these exercises independently out of training process. The main reason for the lack of seats can be considered for employment

Conclusions. Thus, the results of our research show that the technique using specially selected best acrobatic exercises affect both the physical and the technical preparedness of young handballers. In our opinion, it is related to plugging in trainings employments of acrobatic exercises, by the observance of the set mode of trainings, conscious and conscientious implementation of the offered program of employments. The prospects of subsequent researches are related to the ground and development of method of application of acrobatic exercises in different periods of training process.

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