

THE STRENGTH, THE BASIC MOVEMENT QUALITY IN SELECTING CHILDREN FOR THE ARTISTIC GYMNASTICS

FORTA, CALITATE MOTRICĂ DE BAZĂ ÎN SELECȚIA COPIILOR PENTRU GIMNASTICA ARTISTICĂ

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Abstract: The artistic gymnastics is the sport which in the last few years has suffered major changes in the technical and artistic requests for apparatus, the focus being now on the strength. The scoring code is directed to the difficulty of touching the sportive skillfulness and to a more accurate selection of the gymnastics execution.

Aims. Valuing physical training program with children selecting on based on strength and efficiency of the time allocated for the preparation of technical apparatus.

Subjects. The research consisted in 2 groups of 10 gymnasts each, at the age 8 years. One of group was made up of children with special movement qualities, carefully selected, and one group was made up of children from Sportive National College "Cetate" Deva.

Methods. It was done a special program for the development of motor skills where I watched in particular developing muscular strength.

Results. Significant growth stands out from all the experimental group performed screening of like the witness group with differences from 36.6 testing development of abdominal strength, pushups with a difference of 23 reps, standing in distant square with 6.3 sec, speed running of 20 m with a difference of 0.16 sec, long jump with 6.5 cm, back extension of the body with 20 reps and genoflexiuni with jump with 16 reps. All these results were found in an arithmetic average of the experimental group like the witness group.

Conclusions. Synthesizing all results registered in our experiment we conclude that, although both groups took the same program of physical training, the experimental group showed significant increases in all of the tests compared to the witness group, while ensuring a proper technical perspective in learning the technical elements.

Key words: strength, movement qualities, selection, test, means.

Rezumat: Gimnastica artistică este sportul care în ultimi ani a înregistrat schimbări majore în cerințele tehnice la aparate punându-se accent pe forță. Codul de punctaj s-a orientat spre dificultate în atingerea măiestriei sportive și a unei departajări mai clare a execuțiilor gimnastelor.

Obiective. Valorificarea programului de pregătire fizică cu copii selecționați pe criterii de forță și eficientizarea timpului alocat pregătirii tehnice la aparate.

Subiecții. Cercetarea a cuprins două grupe a câte 10 gimnaste cu vârsta de 8 ani. O grupă a cuprins copii selecționați cu calități native de forță și cealaltă grupă copii din cadrul Colegiului Național Sportiv "Cetate" Deva.

Metode. S-a efectuat un program specializat de dezvoltare a calităților motrice unde am urmărit în special dezvoltarea forței musculare.

Rezultate. S-au remarcat creșteri semnificative la toate testările efectuate ale grupei experimentale față de grupa martor cu diferențe de la 36,6 repetări la testarea de dezvoltare a

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forței abdominale, flotări cu de 23 de repetări, menținut în echer depărtat cu 6,3 sec, alergare de viteză pe 20 m cu 0,16 sec., săritura în lungime cu 6 cm, ridicări de trunchi cu 20 de repetări și genoflexiuni cu săritură cu 16 repetări. Toate aceste rezultate au constat într-o medie aritmetică a grupului experimental față de grupa martor.

Concluzii. Sintetizând toate rezultatele înregistrate în experimentul nostru putem concluziona că, desi ambele grupe au desfășurat același program de pregătire fizică, grupa experimentală a evidențiat creșteri semnificative la toate testările față de grupa martor, asigurând în perspectivă o tehnică corectă în învățarea elementelor la aparate.

Cuvinte cheie: forță, calități motrice, selecție, probe, mijloace

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INTRODUCTION

The selection of children for practicing this sport is a determinative factor both at a national and at an international level, being itself a process includes in the general sportive training process ,

“The strength development implies first of all the establishment of the strength the requested by the competition activity, for which the gymnasts is prepared determining the choice of means , methods and work time” (Dragnea, Teodorescu, 2002, p, 366).

According to Todea, “Touching certain superior indicatives of strength, speed, stamina and ability provides the consolidation and improvements of the movement skills, which stands as a condition for further sportive evolution and assures the achievement of a greater number of technical procedures “(Todea, 2006, p.61). In gymnastics “the strength has different forms: The dynamic strength, the explosive strength and the static strength” (Vieru, 1997, p.40). Vieru considered that “the strength in gymnastics is a fundamental movement quality, because every movement requires muscular contraction and it is compulsory even in the process of the other movement qualities” (Vieru 1997, p. 39). The specialists who made researches in this domain of activity have reached to a conclusion: “The capacity of strength – speed is determined by the capacity of maximum strength (given by the muscles) and by the capacity of quick contraction.

Professor Alexe has also reached to a conclusion that “when we deal with lessons particular for sports which require the strength in the speed regime, the volume must be small and the intensity high, for performing 3-6 exercises, and for these with middle volume, 6-8 exercises” (Alexe, 2002, p. 131). Each sportive, in his her turn, represents an individuality from the point of view of the movement behavior, possessing movement qualities that can be develop through specific training methods.

The sportive training is a unitary pedagogical process of instruction and education whose main purpose is to achieve high performances and in order to achieve them, superior indicatives for physical training are necessary, together with improved movement skills at a high level, moral qualities and proper will. The requests determine the training factors and as in any other sportive branch, the content of the training in gymnastics is based on the following factors: technical preparing, physical, psychological, theoretical and tactical preparing.

Although all the factors in the sportive training are of a major importance, being closely linked, they are treated and development individually from a theoretical and didactical reason.

The physical preparing (9 training) is one of the preparing factors, having a vital contribution for learning and improving the exercises, considered as the basis of supporting the technical preparing and of achieving the sportive performances. According to Bompa ” the physical training stands at the basis of the pyramid on which the performances is built. The more power full the physical training basis is, the higher will the technical tactical and preparing level be. (Bompa, 2006, p. 48).

THE SUPPOSITION

Taking into account the complexity of testing in artistic gymnastics and the high level of fulfilling the requests from scoring code, we consider that it is necessary that the selection of the children should be focused especially on the strength also that the development of the moving qualities should also take an important place in the training process.

THE PLACE AND DURATION OF THE EXPERIMENT

The experiment took place on a period of six months, January 2015- June 2015, in the gymnastics domain at the Sportive National College "Cetate" Deva.

The subject. The research consisted in 2 groups of 10 gymnasts each, at the age 8 years. One of group was made up of children with special movement qualities, carefully selected, and one group was made up of children from our club.

In the chart number 2, we have registered the evolution of the experimental group, and in chart number 2 and 3, those of the witness group the methods of the mathematical statistical and graphical representation have been used.

THE MEANS

A program specialized in initiation and on the development of the movement qualities was designed in order to watch especially the development of the muscular strength. The exercises selected for the development of the strength were simple ones, with a short dosing and short series in order to be able to watch the accuracy of execution for movements, rhythm and execution tempo, represented in chart number 1. The program has been applied to both groups to be able to compare the results of both groups and the necessity and importance of the remark in gymnastics for children with native qualities.

Chart no. 1. Means used in the process of preparing development the strength

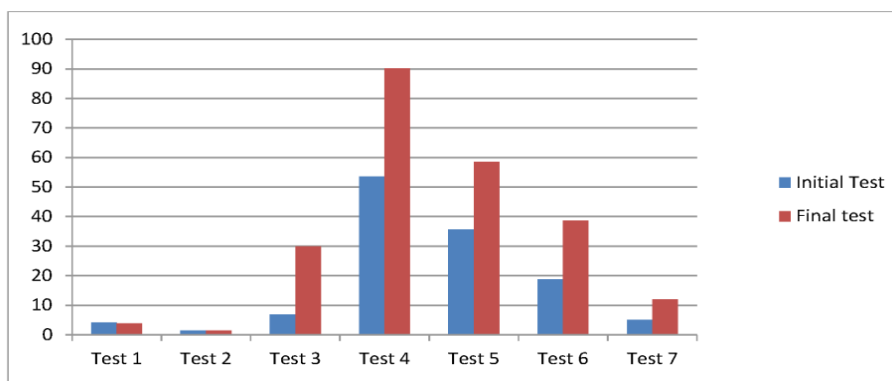
No.	Name of the exercise	Dosing	Series	Weekly repeated programme	Total number of repetition
1.	Body raising from lie down	20	5	2	200
2.	Elbow support legs crossing	10'/20	5	2	200
3.	Lie down – legs raising	15	5	2	150
4.	Lie down – leg raising simultane with body raise	10	5	2	100
5	At the rib stall – hanging legs raising, closed legs	10	5	2	100
6.	Back lie down – standing rolling	10	5	2	100
7.	Front lie down – back crossing legs	10' /20	5	2	200
8.	Front lie down- simultaneous raise of leg and opposite arm	20	5	2	200
9.	Front lie down – body raise	15	5	2	150
10.	Front lie down – rolling	10	5	2	100
11.	Arm support – supported walking to all directions	2 /florr lines	each direction	2	12
12.	Front hanging on the rib stall traction	7	5	2	70
13.	Climbing on the rib stall on every slat	5	5	2	10
14.	Arm support – front side down decartings	12	5	2	120
15.	Arm support back side down	10	5	2	100
16.	Half genuflexiunewith jumps	20	5	2	200
17.	Genuflexiune with jumps	15	5	2	150
18.	From kness position – push with raise and jump	10 / legs	32		120
19.	Straight jumps	25	3	2	150
20.	Raise on toes	50	3	4	600

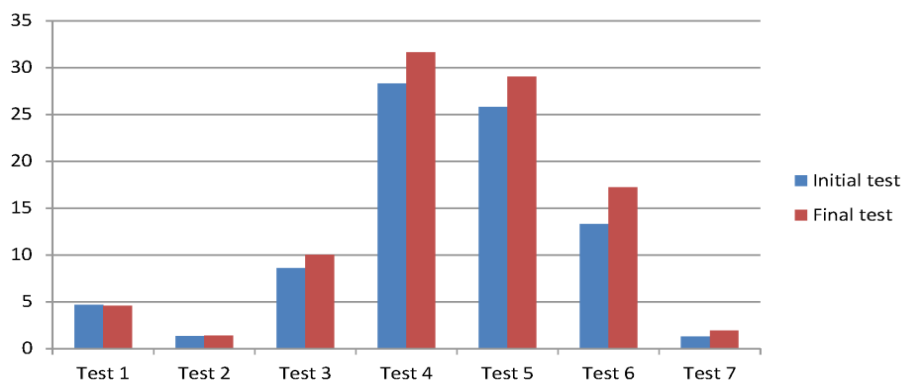
Chart no. 2. Physical testing – The experimental group

No	Name surname	Speed running 20m		Long jump		Push ups		Body raising from line down Test 4		Back extension s of the body Test 5		Genoflexiuni With jump		Standing in distant square	
		Test 1		Test 2		Test 3		Test 4		Test 5		Test 6		Test 7	
		TI	TF	TI	TF	TI	TF	TI	TF	TI	TF	TI	TF	TI	TF
1	R. A.	3,80	3,80	1,54	1,60	5	15	45	165	30	60	12	45	6	14
2	B. A.	3,52	3,45	1,55	1,55	7	37	72	80	32	65	35	60	5	17
3	B. I.	4,27	3,75	1,50	1,40	5	37	65	110	35	70	23	57	10	24
4	B. I.	4,03	3,88	1,25	1,30	5	35	65	73	43	81	27	39	1	28
5	I. A.	4,20	3,45	1,20	1,40	4	36	46	60	31	50	14	36	2	5
6	C. P.	3,42	3,70	1,45	1,30	15	38	108	140	50	55	20	28	17	12
7	S. I.	3,78	4,00	1,40	1,53	4	30	50	70	46	60	19	29	3	7
8	S. D.	4,76	4,30	1,30	1,40	6	10	15	20	24	50	12	20	0	2
9	C.A.	4,20	3,65	1,28	1,50	12	31	58	116	33	61	14	50	5	8
10	M. A.	4,90	4,77	1,15	1,40	6	30	12	68	32	34	12	23	2	3
	X	4,09	3,87	1,36	1,44	6,9	29,9	53,6	90,2	35,6	58,6	18,8	38,7	5,1	12
	S	0,48	0,39	0,13	0,22	3,6	9,7	27,7	42,5	8,09	12,6	7,7	14	5,08	8,82
	Cv	11,73	10	9,55	15,28	53	34,	51,8	47,14	22,7	21,6	40,9	36,1	99,6	73,5

Chart. no 3. Physical testing – The witness group

No	Name surname	Speed running 20m		Long jump		Push ups		Body raising from line down Test 4		Back extensions of the body Test 5		Genoflexiuni With jump		Standing in distant square	
		Test 1		Test 2		Test 3		Test 4		Test 5		Test 6		Test 7	
		TI	TF	TI	TF	TI	TF	TI	TF	TI	TF	TI	TF	TI	TF
1	N.D.	4,86	4,80	1,30	1,40	11	12	32	35	25	25	18	15	1	1
2	B.A.	4,98	4,92	1,30	1,25	12	10	25	25	25	30	15	20	2	3
3	T.A.	4,76	4,75	1,47	1,50	7	10	29	25	32	36	10	17	0	0
4	G.I	5,25	5,10	1,25	1,25	8	10	33	35	33	38	11	15	2	2
5	R.C.	3,90	3,58	1,30	1,40	5	10	26	28	28	35	20	25	1	2
6	P.A	3,85	3,90	1,29	1,28	7	9	19	30	15	20	12	15	1	2
7	D.A	4,28	4,25	1,27	1,35	9	8	34	40	19	23	12	12	3	5
8	B.D	4,57	4,55	1,55	1,58	10	11	33	40	34	34	15	15	2	3
9	H.D	4,97	4,95	1,40	1,30	5	7	27	30	20	20	10	15	0	0
10	D.E	5,20	4,98	1,27	1,30	12	14	25	28	27	30	20	23	1	1
	X	4,66	4,58	1,34	1,36	8,6	10	28,3	31,6	25,8	29	13,3	17,2	1,3	1,9
	S	0,27	0,26	0,01	0,1	7,15	3,9	22,9	31,38	40,55	45,22	16,44	17,06	0,9	2,32
	cv	5,79	5,68	0,11	7,35	83,14	39	80,92	99,3	157,2	155,9	123,6	99,19	69,23	122,1

**Graphic no. 1. - The experimental group**



Graphic no. 2. – The witness group

RESULT AND INTERPRETATION

After the interpretation of the statistics from graphics 1 and 2, significant changes between the initial and final testing may be underlined for the experimental group, which consisted in children with native physical qualities, who followed the same program of physical training as the witness group. So, we may notice a significant increase of the performances for all the testing compared to the witness group. In the case of the physical testing from chart no. 2 and 3, we may notice major differences of progress for the testing of raising from lie down abdomen, with an average of experimental group from 53,6 to 90,2, number of repetition like witness group who managed just a progress from 28.3 to 31.6, which highlights a difference of 33.3 repetitions per group at the experimental group, pushups testing of experimental group from 6,9 to 29,9 number of repetitions with a progress a 23 number of repetitions like witness group, with just a average of 1,4 number of repetitions from the 8,6 to 10 repetitions, and another testing witch have a significant difference between the groups is standing in distant square with a results from experimental group from 5,1 to 12,0 sec and 1,3 to 1,9 sec. a witness group, so that you can highlight the difference in progress of 6.6 sec at the experimental group.

CONCLUSIONS

The strength is one of the movements qualities watched in gymnastic, and according to the current scoring code where the focus is on the execution of certain technical elements of a high difficulty, it has been noticed that in selecting the children the focus should be on the movement native qualities, especially those of strength.

After the experiment, I have come to the conclusion that the hypothesis according to which the selection of artistic gymnastics for children with native qualities of strength is urgently important and can improve significantly the result of preparation.

Synthesizing all the results offend by the above analyzes, we can appreciate that although have been performing the same means and physical training program from both groups, have highlighted significant increases in all tests of the experimental group like the witness group. Of course the gymnasts need the muscular strength and the following the results of our experiment we can have certain improvements in learning and perfecting of technical elements, amplitude, technical accuracy and safety enforcement exercises and avoiding accident.

Of course, the objectives of the physiologic potential of the gymnasts and in the development of the movement qualities at the highest level.

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