JUMPS POLYVALENT TRAINING FOR 3rd STAGE JUNIOR ATHLETES

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Abstract: The polyvalent training must ensure the developing of a body which is capable to adapt quickly and rigorously, in the following stage, to any effort necessary for an athletic task, especially jumps, based on various available motor skills. The content of a polyvalent training views endowing the athlete with an increased motor capacity in the context of a larger range of general motor features and a complex system of motor skills which are specific to jumps training. The athletic polyvalent training in jumps ensures both the complete development of the body's effort capacity and the improvement of the motor system (psychosensoriality), psychomotricity and, implicitly, the learning capacity and motor improvement.
Keywords: *training, polyvalent, jumps.*

Introduction

The concept of polyvalent athletic training encompasses:

- the balanced development of all physical qualities in relation to age particularities;
- the formation of a stock of motor skills specific to athletics, including learning the techniques of running, jumping and pitching;
- practicing tests like poliathlons in competitions.

Conceived in this way, polyvalent athletic training accomplishes both the complete development of the body's effort capacity and the exercise on multiple levels and on this basis the improvement of the motor apparatus (improvement of psycho-sensitivity), the psychomotricity and, implicitly, the learning skills and motor improvement ability [2,3,8].

The goal of polyvalent athletic training is to broaden the scope of the future athlete's fitness state for performance athletics [4,5].

Theme Choice Motivation

It is considered that in the age of children, juniors III (11-14 years), the emphasis should be on a poly-athletic training that constitutes the platform for launching specialized training and not damaging the health of the athlete, such as an exclusive specialization on a particular test.

The aim of the paper

This paper seeks to ascertain the particularities of the polyvalent training of children and juniors, as well as the particularities of specialization in a certain test (tests) at junior III level based on the distribution of the means of action in the annual plan, as well as the norms and tests of control in the specialization of jumping tests

Work hypothesis

We need to find out if there is a relationship between the process of specialization and the level of somatic development, the degree of multilateral physical training and the selection for the chosen sample.

Research tasks

- Selection of the means of action and their distribution during a competitive year with an eye to polyvalent preparation;
- Knowing the level of motor capacity through the norms and control tests applied in training and contests at children's level;
- Knowing the level of motor capacity through norms and control tests for presumptive junior level III specialization, in a group specialized in jumping;
- Establishing the drafting data of the paper;
- Writing the paper and presenting it for obtaining the principle approval, provisional conclusions;
- Finishing the paper; drawing up annexes, tables, lesson plans, protocols, graphs, etc.

Research methods

a. The method of the study of specialty bibliography and of the documents for planning and evidence.

We used the method in order to specify the field in which the research is carried out and to support with scientific data all the particular aspects resulting from the planning and drafting evidence documents.

b. The method of statistical data processing and interpretation.

This method offers the possibility of all methods related to the training, morphological and functional development of the subjects, contests' results, control tests, checks as well as training, after which, based on processing through statistical indices, allows general or particular assessments to be made on the studied

phenomena. We used a basic statistical index, in data processing, we then illustrated them in a series of tables with the role of making the statements, the conclusions formulated more prominently.

c. The test method used to measure the performance obtained through a series of tests and control tests.

d. The direct observation method - it is applied in the training process as well as in competitions.

e. The experiment method - is the basic method of scientific research, it has acquired customization for the basic work by using the experimental observation. All the data obtained from the initial, intermediate and final tests were compared with the baseline indicators established by the FRA model for this level of work and for recording the results of the control tests (carried out periodically, on preparatory stages) as well as based on the results obtained at the most important competitions. We have tried to determine the effects of the methodical orientation chosen on sport performance, as well as the implications of the dynamics of the main parameters of effort on sport performance.

Theoretical Foundation of the Work

The development of motor skills is of great importance both for the improvement of the biological potential of the body and for the practice of a sporting branch as a basic condition in achieving superior results. Therefore, it is necessary that in the activity of physical education and training, regardless of age, specialization or sports qualification, special attention to be paid to the development of motor skills [6,12].

In the specialized training of performance athletes, the methods and means used to develop the motoring qualities must be chosen in accordance with the particularities of the specific exercise of the sporting branch.

Multilateral training and specific orientation are important methodological issues that need to be addressed in a differentiated way in the training of professional athletes [13].

Thus, with beginner athletes, multilateral training must be seen as a prerequisite for achieving outstanding future results [7].

In the case of specialized, experienced athletes, the way to obtain valuable results is that of a thorough specialization which implies the improvement of those motor skills and the use of means corresponding to the specificity of the test [10,11].

In athletic tests - jumping, in which athletes are specialized, the motor skills are speed, strength and skill [14].

Research Organization

The Subjects

In this paper we used athletes from LPS "Petrache Triscu" from Craiova from the athletics section, current third category juniors corresponding to the age of 14-15 years.

We checked their training through the given control norms and tests, as well as their best results obtained in the basic tests as a presumptive specialization at junior level III.

Athletic Training Objectives. Means Used

Both specific and non-specific means can be used. Within non-specific means there can be various games that engage in the effort as many muscles as possible, to strain the development of motor skills [1,9].

I. Training Objectives:

1. Improvement of the technique in presumptive specialization tests.
2. Development of alactacid and lactacid anaerobic velocity, strength and resistance.
3. Improving the elements of the running, jumping and pitching school.
4. Improving performance capacity on combined tests.
5. Continuing polyvalent training.

II. Training Tasks in speed running:

1. Improving running with acceleration;
2. Improving the speed step;
3. Improving the bottom start and the launch from the start;
4. The finish and the attack of the arrival line.

III.Means Used:

1. Running with acceleration on a 80-120m distance with 80-100% intensities in a straight line and in turning;
2. Launch run on a distance of 10-30m, with 90-100%, intensities in a straight line and in turning;
3. Bottom starts with launch from the start at 50m distances, individually and in groups, in a straight line and in turning;
4. Repeating the finish and the attack of the line, individually or in groups;
5. Running with acceleration on progressive distances of 40, 50, 60, 70, 80 meters, with an intensity at the end of the distance of 80-95%, in order to develop the sense of acceleration, in a straight line and in the turning;
6. Running with acceleration on distances of 30, 40, 50, 60, 70, 80 meters in the form of a contest.

IV. Training Tasks in Obstacle Course Running:

1. Improving the step over the fence;
2. Improving the bottom start, the launch to the first fence, individually and in groups;
3. Improving the passage over the last fence and finish individually and in groups.

V. Means Used:

1. Exercises to learn how to attack while walking and easy running against the wall, free and above the height of the fence
2. Exercises to imitate a trailer foot from a wall, free and over the fence;
3. Running from stand-up position, with 8 launching steps to the first fence, crossing over 3-5 fences with 3 steps between the fences, with emphasis on attack, on the action of the trailer foot or globally;
4. From easy running, running with a rhythm of 3-5 steps between fences, initiating the attack near the fence and passing the trailer foot over the fence;
5. Running from stand-up position 3-5 fences, with 3 steps between the fences, with an emphasis on the rhythm of running between the fences and the start and launch to the last fence;
6. Running over 4-5 fences starting from down position, focusing on the rhythm of passing over the last fence and running to the finish line;
7. Downhill running on distances of 50, 60, 90, 200m, fences at height and with regular intervals in the form of a contest.

VI. Training Tasks in Jumping:

1. Improving acquisitions from the jumping school;
2. Improving the jumping technique in length by 1 and ½ steps in the air;
3. Improving the high jump technique with dorsal tipping.

VII. Means Used:

1. Successions of steady steps;
2. Successions of jumping steps;
3. Steady steps with intermediate rhythmic motions of even and odd steps;
4. Jumping steps with intermediate rhythmic motions of even and odd steps;
5. Combinations with alternations of steady steps and jumping steps;
6. Long jump without running;
7. Jumping on and over various obstacles with 3, 5, 7 steps, landing on either or both legs;
8. Detachment in "maintained" step, with a spring of 7, 8, 9, 11 steps;
9. Long jump with 1 and ½ steps;
10. Calibration of small, medium and long springs;
11. Long jumping with 1 and ½ steps with threshold pattering, with calibrated spring;
12. Detachment in jumped step with a spring of 7, 9 steps with landing on a high surface
13. Long jump with 1 şi ½ steps in competition conditions;
14. Advancement of the attack leg and the arms with a 90° swing towards the foot with a 10-15 steps, projecting the pelvis forward and putting the foot fast on the ground;
15. Running in a circle with a radius of 10-15m; pattering, detaching, 90° turn to the pattering leg, landing on the place of detachment;
16. Sitting with the back to the mattress, detachment of both feet up and back, landing on the back;
17. The same exercise with detachments from the ground, from the gym bench, from the trampoline;
18. Same exercise with the bar raised progressively;
19. Jumping over the bar with 3-5 steps spring;
20. Improving the pattering in the conditions of more and more rapid springs;
21. Improving the passage of the bar in the conditions of a short spring and in the conditions of a complete spring;
22. High jumps in the form of a contest.

VIII. Training Tasks in Pitching:

1. Improving items from the pitching school;
2. Improving the weight throwing technique;
3. Learning and consolidation of the javelin throw;
4. Learning and consolidation of the discus throw.

IX. Means Used:

1. Distance standing throws with different light objects;
2. Standing two-hand and one hand chest pushes, with the medical ball;
3. Standing launches of gymnastics sticks;
4. Throws and pushes with 3 steps spring, then from running with double support release;
5. Throws from sitting sideways, with the left side towards the weightless throw direction;
6. Sloping slides, imitating the final effort
7. Sloping jumps, with the weight on the neck, without throwing;
8. Weight throwing with spring in race conditions;
9. Javelin practice exercises, for learning the grip and how to carry the javelin;
10. Dropping of the javelin at 6-8m from the standing position facing the throw direction, the right arm is held back, above the shoulder level;

11. Sticking the javelin at a distance of 8-10 m from the left side in the direction of the throw, the right arm is held back, above the shoulder level;
12. 2-step throw away; right-left and throw, starting from the left-hand position towards the direction of the throw, with the right arm stretched back in the shoulder extension, with the tip of the javelin at temple level;
13. Sequences of 4-6 steps with structures similar to the two steps of the previous exercise;
14. Standing in the direction of the throw, with the weight of the body on the left front foot, with the javelin above the shoulder, 4 throwing steps are performed;
15. Throwing the javelin with a spring, in competition conditions;
16. Discus practice exercises for learning the grip and the imitation of the discus' rotation movement at the launching moment;
17. Throwing the discus from a standing side position facing the direction of the throw, from a high position and then a clustered one;
18. Throwing the discus from the side with the left side toward the direction of the throw, from a high position and then a grouped one;
19. Throwing the discus from the back towards the direction of the throw, from a high position and then a clustered one;
20. Execution of the pivot, without a throw, starting from a standing position;
21. Execution of the pivot, without a throw, starting from a standing lateral position with the left side toward the direction of the throw;
22. The last two exercises performed with the discus held, without release, then with release;
23. Discus throwing with spring in competition conditions

X. Developing motor skills. Tasks:

1. Speed development in all its forms, speed remaining a priority quality regardless of the presumptive specialization test;
2. Development of dynamic force and detention;
3. Developing aerobic, mixed and local resistance.

XI. Means Used:

1. Running with standing start for10-60m, with intensity of 95-100%;
2. Running with down start for 10-50m, with 95-100%;
3. Running with launched start 10-30m, 95-100%;
4. Running drills 10-30m, 95-100%;
5. Running with knees up for 5-6 seconds, 95-100%;
6. Downhill running (3-5 ° slope)for 20-40m;
7. Running with handicap, in competition conditions on a distance of 40-60m;
8. Different speed exercises: attention, reaction to various signals;
9. Running over 1-3 fences with down and standing start, with an intensity of 90-100%;
10. Throws with and without spring, made with lighter objects, compatible with an explosive type of effort;
11. Relay race for 30-60m, 95-100%;
12. Alternations of race walking with moderate tempo running for 10-15 minutes;
13. Running for 10-20 minutes at a rate of 4.40 +/- 10sec, the reference heart rate after exercise being of 160-170 pulses per minute;
14. Running on varied terrain for 15-20 minutes;
15. Accelerated run on 80-120m, repetitions with intensities of 80-90%, break of 5-7min;
16. Repeated running in uniformed tempo over distances between 150-600m, with 5-7min pause;
17. Running drills pushing the opposing partner 20-30min.;
18. Running drills with weights (sand bags) pe 10-20m;
19. Running drills uphill or on steps 10-20 min.;
20. Running with knees up uphill or on steps 10-20 min.;
21. Running with knees up with weights 10-20 min.;
22. Lifting up toes from a standing position, with weights;
23. Step ups with weights (5-10kg), on 15-20m;
24. Up hill step ups (stairs), 3-5°, on 15-20m;
25. Repeated jumps from one leg and on both feet up hill or in the sand;
26. Jumping like the ball, various jumping on the spot and in movement, on and off obstacles, over different obstacles;
27. Combination of steady steps and jumping steps;
28. Rope Jumps;
29. Jumps on one leg and both legs over the fences;
30. Semi-squats with vertical detachment.

Research results and their interpretation

TESTS AND CONTROL NORMS RESULTS

Table no. 1 Results obtained in the pentatlon at junior level III

Tests and Control Norms Name and Surname	Long jump without spring (m)	30m a.s.p.	30m a.s j.	50m a.s.p.	120m a.s.p.	300m a.s.p.
A.I.	1,80	5.10	5.25	7.4	22.5	50.1
H.M.	1,60	4.70	4.95	7.2	20.3	42.4
L.A.	2,15	3.90	4.10	6.5	17.5	37.5
L.C.	1,70	4.80	5.10	7.3	21.3	48.7
L.L.	1,80	4.30	4.55	7.0	20.2	43.5
M.M.	1,75	4.90	5.15	7.2	21.7	49.6
V.A.	1,65	4.90	5.30	7.7	22.9	49.3

Table no. 2

Control Tests Name and Surname	800m	60mg	Length	Throwing the oina ball
A.I.	2.30	10.9	4,53	37,20
H.M.	2.18	9.3	4,70	45,75
L.A.	2.06	8.7	6,21	65,80
L.C.	2.25	10.8	4,24	35,10
L.L.	2.20	9.9	4,65	44,90
M.M.	2.24	10.1	5,01	50,40
V.A.	2.27	10.0	4,25	38,25

By correlating the performance obtained at the presumptive specialization test 300 m flat of the L.A. athlete with the results obtained at the control tests, these are divided into:
- tests regarding multilateral physical training;
- tests regarding poly-athletic training.

In this respect, the following correlations have been noted in the case of multilateral physical training:
- moderate correlation with long jump from a standing position (r = 0,50)
- low correlation with 30-meter running, running from stand-up position (r = 0,28)
- significantly high correlation with 30-meter running, running starting from down position (r = 0,71)
- almost negligible correlation with 50 m running, running from stand-up position (r = 0,15)
- small but present correlation with the 120 m running, running from stand-up position (r = 0,25)
- Significantly high correlation with 300 m running, running from stand-up position (r = 0,81).

These are listed in the following table:

Table no. 3

Name and Surname	The Basic Test and the Best Result	Tests on Multilateral Physical Training	The Resulting Correlation
L.A.	300mp. 36”46	Long Jump without spring	r=0,50
		30 m a.s.p.	r=0,28
		30 m a.s.j.	r=0,71
		50 m a.s.p.	r=0,15
		120 m a.s.p.	r=0,25
		300 m a.s.p.	r=0,81

In the case of polyvalent training we have the following correlations:
- moderate correlation with 800 m running, (r = 0,46)
- moderate correlation with 60 m obstacle running (r = 0,51)
- low correlation with 60 m flat running(r = 0,40)
- low correlation with long jump with running (r = 0,25)

- almost negligible correlation with Throwing the oina ball (r = 0,09).
These are presented in the table below:
TABLE NO. 4

Name and Surname	The Basic Test and the Best Result	Tests on Multilateral Physical Training	The Resulting Correlation
L.A.	300 mp 36”46	800 mp	r=0.46
		60 mg	r=0,51
		60 mp	r=0,40
		Long Jump	r=0,25
		Throwing the oina ball	r=0,09

Conclusions

The study, the data obtained confirm our hypothesis that the result of the presumptive specialization test is strongly determined by the degree of multilateral physical training and the level of polyvalent training

There are differences in the medium value of the correlation coefficient for each group of control tests in both categories (physical training and polyvalent training) in the sense of some values of very high significance, in similar or even identical tests.

At the same time, it is worth noting the rather low values of some tests (especially pitching tests, resistance tests), which makes for the perspective of a similar study for the groups of tests in which the future performers could be specialized.

Clearly, at this level of training, it is recommended to simultaneously approach the training process to develop all basic motor skills, respecting the physiological and methodological particularities of sports training.

The value of polyvalent training for athletes in this stage of training is also highlighted by the specialized federation that has shaped the competitive system of beginners (children and juniors III) especially on the polyathlones (triathlon, tetrathlon, pentathlon).

The results obtained provide indicative data on the selection process (a permanent process) as well as on the use of the most effective means of training in the training of young athletes for these tests.

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