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## STUDY ON THE PHYSICAL TRAINING OF THE JUNIOR GYMNASTS III

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### **Abstract**

*The physical preparation in the women's artistic gymnastics is set towards the development of the main combined physical qualities and of the specific stamina as well. Thus, the sports practice in gymnastics is permanently concerned with the periodic change of the physical and technical preparation content in order for the training and performance goals to be achieved.*

*Through the themes we chose, this paper sets as a main objective to determine the level of physical preparation that the junior gymnasts III from School Sports Club (CSS) around the country have.*

**Methods** – *in order to find out the level of physical preparation of the junior gymnasts III a number of 13 general and specific physical tests were applied. Microsoft Excel was used to process the statistics.*

**The results** *restored after the tests showed a major deficit in the physical preparation to the junior gymnasts III that were included in this experiment. This fact explains the poor performance in competitions.*

**Keywords:** *women's artistic gymnastics, physical preparation, tests, physical trials*

### **INTRODUCTION**

The sports training technology translates into a group of methods, means, education, guiding and body recovering technique that are used depending on the set objectives (Bompă O.T., 2002).

One of the basic principles in sports training is the acquisition of a general level of physical preparation before specialising in a particular branch (Grigore V., 2001). In gymnastics it is thought that physical training provides the support for sports performances and the foundation of technical preparation, depending on the sportsmen's age and on their experience, the level of physical training is different. A larger amount of time is dedicated for the preparation of experienced sportsmen than for beginners and juniors (Vieru N., 1997).

### **OBJECTIVES**

The planning, the elaboration and the application of the physical preparation programs for the 11-12 year old gymnast's training contribute to achieving the following goals: obtaining the appropriate level of physical development through analytical and systematic preparation of all muscle groups; shaping and education of a right, esthetical posture through a balanced physical development; providing an appropriate level of development and education of the specific physical skills; the increase of the gymnast's stamina for obtaining and maintaining an optimum sports condition; educating the physical qualities imposed by the intensity and complexity of the gymnastics effort.

### **HYPOTHESIS**

At the base of the work hypothesis lies this idea: if during the training of the junior gymnasts III we use appropriate means of physical preparation adjusted to the sportswomen's individual traits, then better results may be accomplished in learning, establishing and perfecting the technical elements which leads to an increase of sports performances in competition.

### **MATERIALS AND METHODS**

#### **a. Research protocol**

The research was conducted in the School Sports Club Galati gymnasium during September 3<sup>rd</sup> 2013 and February 28<sup>th</sup> 2014.

#### **b. The subjects**

The study groups was made up of 12 gymnasts (6 in the experiment group, 6 in the witness group) aged 11 to 12 (juniors III). They both had the same conditions and the same material base for the training.

#### **c. Evaluation tests**

In order to learn the gymnast's level of physical preparation, a series of trials were applied: standing long jump (S); speed running – 20m (V); from hang position – raising the legs and touching the grab points (A); from hang position – tractions (T); from hang position – front flip and stand (R); leaning forward on hands – hand standing balance (B); straighten from standing position (I); from lied face down position – push-ups (F); from spread standing position – vertical jumps (D); walking on hands (M); from spread sitting position – strength hand stand (Y); from lied on the back position, stretched arms – lifting up the torso – against the clock 30" (E); from lied face down position, stretched arms – body extension – arms, torso, legs – against the clock 30" (X).

#### **d. Exercise models**

After the analysis of the initial tests results, an experimental program for the 11-12 year old gymnast's physical preparation was created and applied for the experiment group. The program was divided into 3 stages (8 weekly cycles with 10 practise rounds a week and a different amount of time of physical preparation for every stage).

Among the processes used in meaning, there are the following:

- **developing the leg musculature**
  - trampoline jumps on/ from a higher surface;
  - front somersault;
  - tuck position, vertical jump, back to tuck position and move forward;
- **developing the abdominal musculature**
  - ladder hang position, horizontal leg raise, maintain – against the clock;
  - hang – leg raise and touching the grabbing points;
  - lied down, bent arms, hands behind the head, leg raise at 45<sup>0</sup>, maintain, scissor movement in lateral sagittal plan – against the clock;
  - lied down on the back, V-sit;
- **developing the arms musculature**
  - high bar hang position, tractions;
  - handstand on the low bar, with the support of a colleague, handstand push-ups;
  - spread sitting position, palms on the ground, strength hand lifting;
  - walking on hands;
- **developing the back musculature**
  - facing the ladder hang position, back extensions;
  - lied face down, arms, back and legs extension;
  - lied face down on the buck, partner support for the ankles, lift in the torso in extension;
- **developing and perfecting mobility, move expressivity and musicality**

- the execution of different moves at the wall bar, in front of the mirror and on the ground (leg pendulation, maintaining body segments in specific balance positions – passe, arabesque, attitude, a la seconde, different walking and running steps – easy step, arched, sharp step, thrust step, high step – dance steps, turns on both feet on one foot, perouettes, hops and artistic jumps) with or without musical accompaniment;

• **developing and perfecting the specific stamina**

- increased number of connections between the elements;
- the full execution of connected exercises on the apparatus;
- the repetition of certain elements, full exercises or fragments without any breaks.

**Results and discussions**

In order to have an accurate representation of the 11-12 year old gymnast's level of physical preparation, the results were converted into points. Both groups had scores below the 30 points limit set for every routine. The experiment group averaged 18,69 points while the witness group had a score of 20,07 points.

At the initial testing the recorded scores showed for both of the groups a high degree of uniformity for the following trials: standing long jumps (4,62% - 6,97%), speed running (6,73% - 7,43%), walking on hands (8,05% - 9,36%), and the other trials showed an average level of uniformity. The significant parameter „t” had values below the significant limit  $P > 0,05$  for all physical tests, except for push-ups, where the recorded values – 3,84 were above the significant limit  $P < 0,01$  – table 1.

**Table 1**

Sample	Comparative values of the indicators of the physical training							
	Initial testing (n = 6)				Final testing (n = 6)			
	G. exp.	G. mar.	t	P	G. exp.	G. mar.	t	P
	<i>x ± m</i>				<i>x ± m</i>			
<i>S</i> <sub>(cm)</sub>	168,4±3,39	168,3±2,24	0,02	>	175±2,08	172±2,08	1,02	>
<i>V</i> <sub>(sec)</sub>	4,01±0,08	3,90±0,07	1,03	>	3,85±0,07	3,91±0,05	0,75	>
<i>A</i> <sub>(rep)</sub>	25,33±0,87	26,25±0,97	0,70	>	29,41±0,62	23,16±0,85	5,94	<
<i>T</i> <sub>(rep)</sub>	6,66±0,25	6,58±0,35	0,19	>	10,58±0,26	7,25±0,25	9,27	<
<i>R</i> <sub>(rep)</sub>	13,5±0,41	13,4±0,28	0,20	>	14,66±0,44	10,25±0,30	8,32	<
<i>B</i> <sub>(rep)</sub>	4,66±0,25	5,16±0,24	1,44	>	6,91±0,31	6,0±0,32	2,04	>
<i>I</i> <sub>(rep)</sub>	3,91±0,22	3,41±0,14	1,92	>	7,16±0,24	4,58±0,22	7,86	<
<i>F</i> <sub>(rep)</sub>	21,41±0,49	25,08±0,82	3,86	<	27,41±0,81	24,41±0,85	2,55	<
<i>S</i> <sub>(rept)</sub>	23,58±0,90	23,08±1,15	0,34	>	31,91±0,58	28,33±0,98	3,14	<
<i>M</i> <sub>(rep)</sub>	18,5±0,50	19,33±0,44	1,24	>	22,75±0,49	19,0±0,71	4,35	<
<i>Y</i> <sub>(rep)</sub>	3,33±0,14	3,16±0,20	0,70	>	6,91±0,31	4,41±0,22	5,70	<
<i>E</i> <sub>(rep)</sub>	21,16±0,61	20,6±0,25	0,84	>	27,83±0,38	25,41±1,10	2,08	<
<i>X</i> <sub>(rep)</sub>	24,0±0,55	24,08±0,76	0,08	>	31,5±0,58	28,33±0,81	3,18	<

After applying this experimental program, the experiment group achieved the following average scores comparable to the ones obtained by the control group:

*Standing long jump (centimeters)* – the average score increased by 9 points for the experiment group, while the witness group had an increase of 6 points.

*Speed running – 20m* – the experiment group: + 10 points, the witness group had the same score as in the initial test.

*Hang position – leg raise and touching the grabbing points (number of repeats)* – the experiment group: + points; the witness group showed a decrease by 3 points.

*Hang position – tractions (number of repeats)* – the experiment group: + 20 points; the witness group: +5 points.

*Hang position – front roll (number of repeats)* - the experiment group: + 5 points; the witness group had scores below the ones registered in the initial tests.

*Hands on the ground – handstand balance (number of repeats)* - the experiment group: + 10 points; the witness group: +5 points.

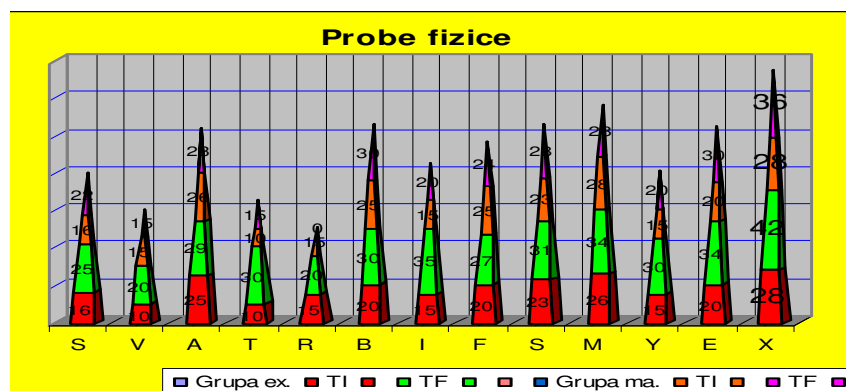
*Hands on the ground – return to vertical position (number of repeats)* - the experiment group: + 20 points; the witness group: +5 points.

*Lied face down – push-ups (number of repeats)* - the experiment group: + 7 points; the witness group: -1 points.

*Vertical jump (number of repeats)* - the experiment group: + 15 points; the witness group: +5 points.

*Lied down – roll-up – 30” (number of repeats)* - the experiment group: + 14 points; the witness group: +10 points.

*Lied face down – back extensions (number of repeats)* - the experiment group: + 14 points; the witness group: +8 points - figure 1.



**Figure 1. Distribution results gymnasts 11-12 years horizon, obtained initial and final testing of the level of physical training**

By comparing the results from the two groups that were included in this experiment, we can see an improvement in the level of physical preparation. The gymnasts in the experiment group used the means and the plans that were imposed by the experimental program and scored 29,76 points, while the control group had a score of 22,38 points. The difference between the two groups at the final test was 7,38 points.

### CONCLUSIONS

1. At the initial test both groups had for the 13 trials an average score below the 30 points set at the beginning of the research.
2. The recorded results after implementing the experimental program shows that the experiment group has superior grades to the witness group and also higher scores at the final tests than in the initial ones for all of the physical tests.
3. The experiment group's results at the final tests highlights the experimental program's efficiency for the junior gymnast girls at the CSS Galati.

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## **A STUDY REFERRING TO THE ROLE OF PHYSICAL EXERCISE IN CORRECTING AND RECOVERING THE PHYSICAL DEFICIENCIES MET AT THE SECONDARY SCHOOL STUDENTS**

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### **Abstract**

*I have dealt with this plot analysing the problem of harmonious physical development met at the secondary school students. The raising in the number of subjects who present physical disabilities is allarmingly. The situation is due to some socio-economical problems as well as to an endless reform of education which directly affects the Physical Education school subject ( as a small number of classes in the comun syllabus).*

**Key words:** *physical education, physical deficiencies, physical exercise.*

The work's aim is to warn about the negative aspects which the scholar uncontrolled behaviour, the weak preoccupation of the teachers about the correct attitude of students in desks during the classes and during the physical education classes sometimes determines the nonharmonious physical development of the secondary school students.

The aim of this work is:

- To make kinetic programs for a functional recovery for all the forms of static disabilities, mainly for scoliotic, cifotic attitudes, generated by the incorrect positions during the scholar activity which can be applied during the classes by the teachers;
- To make some warning schemata of the attitudes which generate static disabilities through incorrect positions which can be followed periodically by the form-teacher or by the medical school personnel.
- To warn about the necessity of early discovery of distorting manifestations which can generate diseases of next position, a duty for the Physical Education teachers and the school medical personnel who is responsible for the correct guidance of these children;
- To underline the idea of promoting the movement, the physical effort as a scholar activity starting from the pre-school stage to create correct postural skills to prevent the distortion of the spinal column.

The objectives and the aims of the present study refer to: the documentation upon the specific intern and international literature; the establishing of the objective; the choice of the subjects; the establishing of the methodology; the calculation and the following of the functional level evolution; the comparative analysis of the data; the drawing of some conclusions as to help during the future activities; the presentation of some observations referring to this problem of the locomotor block.

### **The hypothesis of this work starts from:**

1. The usage of some kinetic programs for all the forms of static problems, mainly for the scoliotic, cifotic problems, generated by the incorrect positions during the scholar activities will succeed to reduce the cases of static problems of these attitudes;
2. The realisation of some programs of kinetoprofilaxy starting from the pre-school period which can lead to some warning attitudes that generate static problems, programs which can be followed by the scholar medical personnel, by the form-teacher and by the Physical Education teacher.