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**THE METHODOLOGY OF THE SPECIFIC TESTS IN FEMININE ARTISTIC  
GYMNASTICS**

*Buftea Victor<sup>1</sup>  
Nastas Natalia<sup>2</sup>*

*<sup>1,2</sup>State University of Physical Education and Sport, Chisinau, Republic of Moldova*

**Abstract.** *In this article are described some specific tests implemented in the basic phase of the training process of the elite gymnasts. In order to achieve a high level of the sportive results, currently there are over 25 types of gymnasts` training, each of them considerably contributing to reach the preset objectives. In this study there are presented the specific tests of the elite gymnasts based on seven types of training, that include verification items for every stage of the training process (initial, intermediary/current or periodical and summative). These specific tests offer precise information about some psycho-motor conditions of the gymnasts and also about the technical-tactical level of the training, in order to know, determine and establish some optimal methods of interposing with the necessary modifications in the scenario of the instructive activities within the training process. Along with other important forms of testing, there are also described some types of testing that can estimate the level of the owned cognitive competences, of the affective-attitudinal features and also of the creative aptitudes, that, on the whole, can transform the training process in a more academic one, thing that can influence the positive dynamics of the sportive results.*

**Keywords:** *feminine artistic gymnastics, methodology, specific tests, training types, cognitive competences, creative aptitudes, motor qualities, technique skills.*

The methodology of the specific tests of the gymnasts in the feminine artistic gymnastics supposes the application of a complex of tests and verification and control items within different periods of the training process or during the participation in the competitions. In essence, the specific test method conditions the entire instructive process using the basic verification, appreciation and grading elements in the training activity [1, 3, 7, 9, 12, 14].

The gymnasts` skills complex researches are based on systematically executed evaluations, and the results are serving as fundamentals for the organizing and developing of the training process at each of its stages. Using the three components: verification, appreciation and grading elements, the evaluation can be realized at the level of the

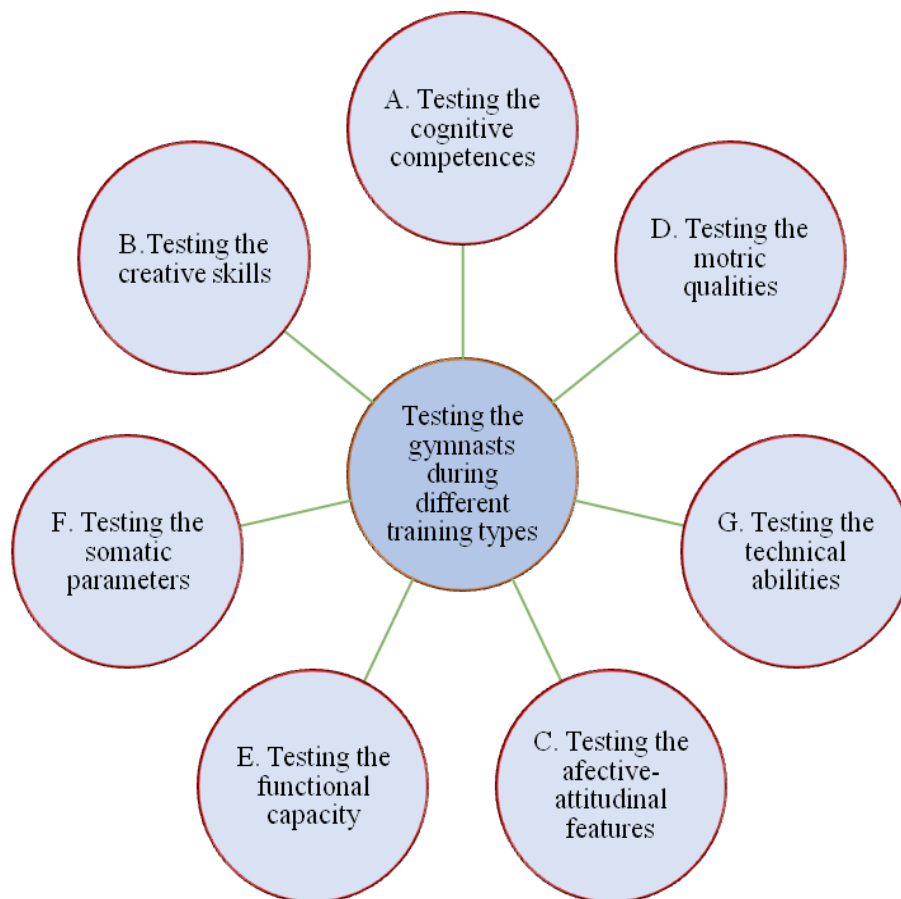
national lot or group, sportive club, team [4, 6, 8, 11, 13].

The evaluation can be performed in a complex form, looking for determining the indicators for the most essential types of training. It is to be mentioned that lately there are highlighted the most informative problem approaches as long as there can be obtained the most relevant results. According to the theory and practice of the sportive training in the artistic gymnastics, in the entire methodological arsenal, there are ascertained over 25 different types of training.

In the study there are described the most important and necessary forms of training, which can eventually generate other types, equally important in the training process, such as acrobatic training, choreographic training, centralized training, precompetitive training,

rotation preparation and others. All of these are mentioned in the scheme of the specific tests model, followed by a detailed description

of their content, in order to obtain useful and constructive information for the multilateral and efficient training of the gymnasts.



**Fig.1. The model scheme of the specific tests of the elite gymnasts during different training types**

A. Testing the cognitive competences (acquaintance of the theoretical aspects) can be effectuated by:

1. Acquaintance of the type of sport – artistic gymnastics – an Olympic sport (short history about this type of sport)
2. Acquaintance of the basic components of the competition apparatus and the specific of working at each event.
3. Acquaintance of the concepts of prevention of the trauma during the training lessons and also, during different phases, events, elements, exercises.

4. Acquaintance and application of self-insurance while performing different exercises, and in exceptional cases acquaintance and application of first-aid procedure.

5. Acquaintance and application of the specific working terminology (the correct terms as indicated in the nomenclature).

6. Acquaintance of the general physical training exercises (GPT).

7. Acquaintance of the special physical training exercises (SPT).

8. Acquaintance of the correct execution technique of different elements and



movements that are included in the study program at the training level (the program for the master of sports and for the master of sports of international qualification) for all of the competition events (vault, balance beam, uneven bars and floor), as well as the execution technique of the special exercises performed at different auxiliary installations.

9. Acquaintance of the rules and principles to obtain the highest training level in the multiannual training process.

10. Acquaintance and application of the execution technique of the exercises from similar disciplines (choreography, acrobatic gymnastics, trampoline jumping, balancing etc.) for filling up the arsenal of competences upon the analogical and identical by form. Structure and content exercises.

11. Acquaintance of the working program: long-term planning, medium length and short length planning periods for creating a view in perspective.

12. Acquaintance of the competition regulations, competition program, arbitration system, systems of scores, the penalties for the incorrectly performed exercises and also for unsporting behavior.

13. Acquaintance of the musical accompaniment for the floor performances.

14. Acquaintance and application of the elements that are included in the competition program at every event, as long as the information about anatomic-physiological aspects, medicinal-biological aspects, eating regime, recovery regime, biomechanical particularities, chemical compositions, variations of special nutrition etc.

Acquaintance and application in practice of this information by the gymnasts and other useful information can be appreciated by the specialists (theoreticians and practitioners, trainers, methodists) in accordance with the scoring system from 1 to 10.

B. Testing the creative skills include:

1. Elaborating and application of an acrobatic combination based on ten elements. The creativity test suggests composing an acrobatic combination from at least ten elements that are interconnected and performed on the acrobatic track.

2. Elaborating and application of a floor performance composed from 32 numbers. This performance can be appreciated by the aspect of the elements' place in the acrobatic combination, the diagonals, the perimeter limits of the floor exercise area, the originality aspect regarding the succession of the moves and their correlation, as well as the artistry, expressiveness and executing technique of the moves. The performances are scored by the experts using the 10-point system of scores.

3. Elaborating and application of an artistic performance at the balance beam. This performance can be realized at the height of 65-70 cm from the floor, including ten elements connected with some auxiliary moves and exercises.

4. Requiring of a general and special physical training project. The project supposes to create a complex of ten exercises, five of general training and the other five of special training.

C. Testing the affective-attitudinal features.

The psychological features are characterized by the mental condition of the gymnast and it determines a certain level of attitude and behavior. These aspects generate the way of acting in concrete working circumstances and it directly affects the sportive performance. The most important features can be studied analyzing the following indicators:

1. Self-confidence
2. Appreciation for a certain purpose
3. Ability to concentrate the attention
4. Learning ability



5. Performance growing capacity
6. General behavior

In accordance with the responses of the subjects, the scores are as follows: for the “very bad” option – 1 point; for “bad” – 2 points; for “medium” – 3 points; for “good” – 4 points and for “very good” – 5 points. This examination allows determining the level of owned moral-psychological qualities in a multiannual training process.

D. Testing the motor qualities can determine the following:

1. Movement speed: running 20 m., flat, up starting position (sec.)
2. Detente, standing vertical jump with landing on mats. The gymnast makes an effort to jump up with the goal of touching the highest point she can reach; the gymnast can perform these jumps 3 times (cm.)
3. Standing long jump (cm.)
4. Ground rejection jump in depth
5. Bending and unbending the arms in a handstand position at the even bars.
6. Hanging straight legs rise (nr.)
7. Rising in a handstand position from a bended posture with palms on the floor (nr.)
8. Climbing the rope without using the legs (3m.), (sec.)
9. Holding a high V-sit (sec.)
10. Holding a hanging back horizontal position
11. From a hanging on the low bar in a V-sit hold, rising in a handstand position (nr.)
12. The Romberg test (sec.)
13. The Matorin Test (degrees).

E. Testing the functional capacities can determine:

1. The cardiac frequency – the number of myocardium contractions in a unit of time (10 sec.x6)
2. Blood pressure - blood pressure on arterial walls (maximum systolic: 100-135

mmHg, diastolic minimum:  $\frac{1}{2} + 1$  of the maximum).

3. The effort capacity index, which can be appreciated after a 5-minute effort (ascents on the gym bench and descents) and after a 1 minute rest with heart rate recording (FCC) for the next minute.

$$ECI = \frac{t + 100}{5,5 \times p}$$

Where ECI – effort capacity index, t – time, 5.5 – constant coefficient, p – pulse.

Scores: over 60 units – very good; 50,1 – 60 – good; 40,1-50 – medium; 30,1 – 40 – low; under 30 – very low.

5.Ștanghe test – holding breath after a deep inspiration (sec.)

6. Ghenci test - holding breath after a deep expiration (sec.)

7. The functional condition of the cardiovascular system (Robinson)

$$\frac{FC \times TAS}{100}$$

F. Testing the somatic parameters include:

1. Height
2. Weight (kg. and g.)
3. The shoulder width (cm.)
4. Thoracic perimeter – measured as in a resting state, as during an inspiration and an expiration (cm.)
5. Erissman index - (index of the proportionality of thoracic box development): I.E. =  $Pt - T / 2$ , where: I.E. - Erissman index, Pt - thoracic perimeter, T-height. Qualifications: For girls  $\geq 3.3$ , the chest box indicates good development. Smaller or negative values indicate flattened chest.
6. Pignet index - (body conformation index) expresses the difference in body length and body mass with thoracic perimeter:  $IP = h - (m + Pt)$  where: IP - Pignet index (conventional units); h-height (cm); m- body mass (kg); Pt - thoracic perimeter (cm):  
+/- 20 - good and very good nutrition status;

+/- 30- medium nutrition status;

+/- 40- means poor nutrition.

G. Testing the technique abilities. Various technical elements, combinations and compositions can be applied at this stage of training. These skills need to be appreciated by the technical fulfillment of the difficulty requirements of concrete elements of the apparatus: jumping with support, beam, uneven parallels, free ground exercises.

Examples:

\* jumping with support - over vaulting table:

1-take-off, round off with turn (180 ° on the runway), with feet entry on the floor, round off- back in handstand position, hand repulsion, flying and landing (Iurcenko style vault) (initial testing);

2 - Tsukahara with stretched salto backward: take-off, round off-with turn around on the runway, returning onto the vaulting table with feet, pushing with round off back, passing by hand standing and hands repulsion, making the extended salto with extension and landing (during current / intermediate and summative testing).

\* Uneven bars:

1 –grasp by unbending at the u / b (upper bar), standingturn over back without touchinginhand standing position, giant back (rotation), and dismountwith stretched saltoinlanding position (in the initial tests);

2 –grasp by unbending at the l / b with rebound from the upper bar, graspingatu/b,

three giant acceleration rotation, dismountdouble piked salto and landing (in current / intermediate and summative tests).

\*Beam:

1 –side turnover , round off with turn around, single dismount back salto tucked (in the initial tests);

2-entryby forwardtake-off salto,round off with turn and double salto tucked with landing (in current / intermediate and summative tests).

\* Free and floor exercises:

1 round off with turn, round offback - stretched back salto (in the initial tests);

2-roundoff- forward on both feetin single front somersault tucked,roundoff with turn, and 360 ° extended back sault, landing (in current / intermediate and summative tests).

In order to organize the multiannual training process efficiently, permanent records are required on the achievement of gymnasts' performance throughout the training period. Performance dynamics can be recorded according to the results obtained in the evaluation lessons and the participation of gymnasts in competitions. Performance testing should also be realized in accordance with the volume of material included in the planning strategy based on verification, evidence and control of all types of activity provided by the centralized training program.

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