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Original article

DEVELOPING SPEED, FLEXIBILITY AND MOBILITY IN THE INTERNATIONAL LEVEL FOOTBALL - TENNIS PLAYERS

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Abstract

Football-tennis is a sport that appeared in 1922, and in 1940 the first official regulation appeared. It is a sport practiced both individually and in teams, here being found the singles, doubles, triples; mixed double and triple and is practiced by both men and women. It is a complex sport which involves all muscle groups as well as all the technical-tactical aspects and the motric qualities: speed (reaction, execution, movement, in relation to force and endurance); force (force-speed, force-resistance); resistance (specific, anaerobic); flexibility and mobility; coordinative capacity.

National and international literature does not abound in scientific publications in football-tennis. It should be mentioned that Romania, at a competitive level (World Championships, European, World Cups) has remarkable results in all categories in which it participates.

Our study aims to highlight the training program of world-class football-tennis players in Romania and highlighting in particular the development of motor quality of speed (execution, movement, reaction) and flexibility and mobility with the help of OptoJump.

Keywords: football-tennis, performance, physical training, questionnaire.

Extenso

Football-tennis is a sport that appeared in 1922, and in 1940 the first official regulation appeared. It is a sport practiced both individually and in teams, here being found the singles, doubles, triples; mixed double and triple and is practiced by both men and women. It is a complex sport which involves all muscle groups as well as all the technical-tactical aspects and the motric qualities: speed (reaction, execution, movement, in relation to force and endurance); force (force-speed, force-resistance); resistance (specific, anaerobic); flexibility and mobility; coordinative capacity.

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The research methods used in this paper are the following:

- Method of pedagogical observation;

Pedagogical experiment method; Statistical-mathematical method; Survey method.

Study hypothesis: the use of operational modules will contribute to the development of speed (reaction, movement, execution) and flexibility and mobility to achieve performance in women's football-tennis.

The scientific research was held for a period of 10 months, with a number of 10 subjects, members of the national Football-Tennis team, within the

Izvorani Olympic Center, at the National University of Physical Education and Sports. The training of the players was composed of 3 preparatory periods / 40 trainings / stage; 3 pre-competition periods / 20 training sessions / stage and 3 competitive periods / 10 training sessions / stage.

Following programs to develop the speed (execution, reaction, movement) of performance football-tennis players, progress has been made with the help of the OptoJump test battery:

We will also present a series of specific trainings for the development of flexibility and mobility in women's football-tennis.

- 5 meters running speed (step length, long distance, flight time, contact time, flight phase, flat foot, propulsive phase, steps (w / w), height, angle of inclination, speed (m / s), average speed.

Speed development training program (execution, reaction, movement):

Training 1:

✓ V1: sitting, rope jumping - sprint on 20m (4x30 "x20 x15" px100%). Volume 70% and intensity 100%; dosage 1-3x; passive 30- second pause; work formation - line on a single row.

✓ V2: sitting, running with knees up - sprint on 20 m (4x10x20x15 "px100%). Volume 70% and intensity 100%; dosage 1-3x; passive 30 -second pause; work formation - line on a single row.

✓ V3: standing with his feet slightly apart at the 6.40 m line, the performer is positioned at the midline of the playing field, having 2 cones placed

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on the ground to his left and right at 2 meters from him. It must move as fast as possible through the added step from one cone to the other 30 "(4x30" x30 "px100%). Volume 70% and intensity 100%: dosage 1-3x; break 1 min passive, work formation - line in a row at 1 meter of net.

✓ V4: in pairs of two, at 2 m away from the net, the player stays on the right side line of the field - running in 4 points (left front / back; right front / back) - speed running - taking the ball - low-level attack along the line. (4x30'x10px100%). Volume 70% and intensity 100%: dosage 1-3x; break 1 min passive; working formation - 2 columns, one behind the other.

✓ sitting, balls at the net on the left side line - the performer starts from 6.40 m in speed running, takes a ball - return from the starting point - self-pass - top attack along the line / grazing with the net on the long line. (4x20x30 "px100%). Volume 70% and intensity 100%: dosage 1-3x; break 1 min passive.

✓ footwork, - individually, left and right taking overs with top attack along the line (4x20x30 "px100%). Volume 70% and intensity 100%: dosage 1-3x; break 1 min passive.

Training 2:

✓ V1: sitting, rope jumping - sprint on 20m (4x30 "x20 x15" px100%). Volume 70% and intensity 100%; dosage 1-3x; passive 30- second pause; work formation - line in a row.

✓ V2: sitting, vertical jumps front / back in both legs - sprint on 20 m (4x10x20x15 "px100%). Volume 70% and intensity 100%; dosage 1-3x; passive 30 second pause; work formation - line in a row.

✓ V3: standing with his feet slightly apart at the 6.40 m line, the performer is positioned at the midline of the playing field, having on the ground 2 cones placed to his left and right at 2 meters from him. He must move as fast as possible by adding step from one cone to another - sprint on 5 m - long line attack (4x30 "x5mx10x30" px100%). Volume 70% and intensity 100%: dosage 1-3x; break 1 min passive; work formation - line in a row at 1 meter distance from the net.

✓ V4: in pairs of two, at 2 m from the net, the player at the midline of the playing field - moving to the left - jumping over the obstacle - passing from the partner - long line attack.(4x20x30

"px100%). Volume 70% and intensity 100%: dosage 1-3x; break 1 min passive; working formation - 2 columns, one behind the other.

✓ V5: in pairs of two, at 2 m from the net, the player at the midline of the playing field - moving to the right - jumping over the obstacle - passing from the partner - long line attack.(4x30x30 "px100%). Volume 70% and intensity 100%: dosage 1-3x; break 1 min passive; working formation - 2 columns, one behind another.

Training program on the development of flexibility and mobility:

✓ SM1: sitting with the torso straight, arms forward and perfectly extended, knees bent at 90 degrees and toes facing inward (known as kiba dachi) and feet more than shoulder level (4x30 " x15 "px100%). Volume 70% and intensity 100%; dosage 1-3x; passive 30 second pause; work formation - line in a row.

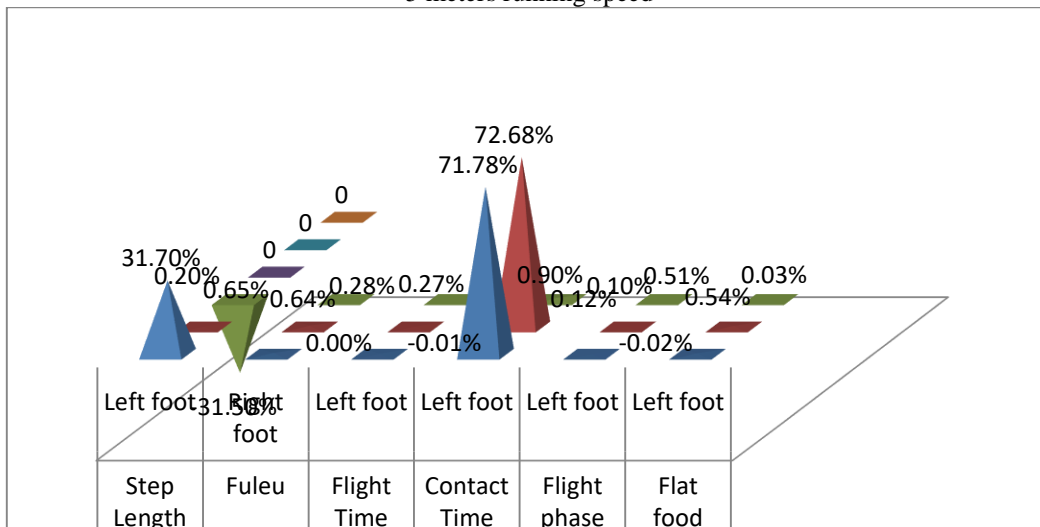
✓ SM2: sitting with the torso straight, arms forward and perfectly extended, knees bent at 90 degrees and toes facing outwards (known as shiko dachi) and legs more than shoulder level (4x30 " x15 "px100%). Volume 70% and intensity 100%; dosage 1-3x; passive 30 -second pause; work formation - line in a row.

✓ SM3: sitting - working with partner, on either side of the net, the performer holds the lower limb on the partner's shoulder without lifting the supporting leg off the ground or bending the leg - holding in the painful point (4x30 "px100%) . Volume 70% and intensity 100%; dosage 1-3x on each leg; passive 30 second pause; work formation - line in a row.

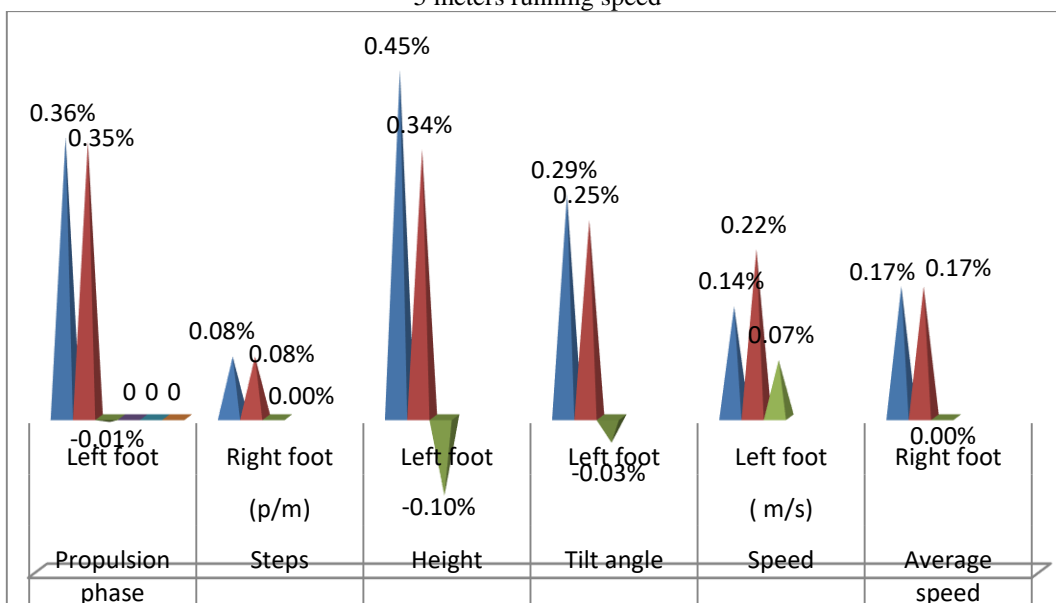
✓ S.M.4: standing, starting from 9 m on the right side - running diagonally to the net and mimicking the attack shot from the inside to outside along the entire width of the net and 1 m from it - sprint on 10 m(4x10x10x15 "px100%). Volume 70% and intensity 100%; dosage 1-3x; passive 30 second pause; work formation - line in a row.

✓ S.M.5: sitting, the balls at the net on the right side line - the performer makes the movement from inside to outside - step from the partner - attack from above on the diagonal (4x15x30 "px100%). Volume 70% and intensity 100%: dosage 1-3x; break 1 min passive.

Gratic1. Different Coefficient Variability from initial test to final test for 5 meters running speed



Graph 2. Different Coefficient Variability from initial test to final test for 5 meters running speed



Conclusions

Following the research carried out and the results obtained with the help of the OptoJump test battery and the training models used in the research regarding the development of speed and the development of suppleness and mobility, an improvement of these motric qualities was observed, resulting in the fact that training were effective.

The difference regarding the coefficient of variability of the average of the maximum values from the initial test to the final test for 5 meters running speed is given by the following data: step length (left foot) -31.50%; foil (right leg) 0.00%; flight time (left foot) -0.01%; contact time (left foot) 0.90%; flight phase (left foot) -0.02%; flat

foot (left foot) 0.03%; propulsive phase (left foot) -0.01%; steps p / m (right foot) 0.00%; height (left foot) -0.10%; tilt angle (left foot) -0.03%; speed m / s (left foot) 0.07%; average speed (right foot) 0.00%. which led to increased homogeneity and speed.

Following the application of some questionnaires in the countries practicing women's football-tennis at a higher level, questions related to the number of trainings / weekly cycle allotted for the development of motric qualities, it was concluded that in Romania there is a higher number of trainings for speed development.



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