EXPERIMENT ON THE GROWTH RATES OF DEVELOPMENT OF SPECIFIC GAME OF HANDBALL DRIVING QUALITIES, TROUGH SPECIFIC MEANS ATHLETICS, TO JUNIORS II ECHELON

CICMA IOAN TEODOR1, MEREUŢĂ CLAUDIU1

Abstract

Purpose. The purpose of this paper is to present and demonstrate one of the effects of increasing development indices, specific driving qualities of handball game, namely athletics, as well as to contribute to the enrichment of research in this area.

Methods. In order to achieve the experimental study, as follows from the paper’s title, there was used athletic specific means which we have classified them according to the driving quality of which development was followed such runs were used in all forms and tempi, variable distances sprints, passing at speed, jumping, throwing, starts from different positions, combinations.

Results. The driving and technical samples set were: 1.-Standing long jump (S.L.J)/ P=0,05; 2.-Speed running at the 30m distance/ P=0,11; 3.-Dribbling through cones/ P=0,21; 4.-Handball ball throwing at distance/ P=0,79; 5.- Ten steps jump (min. 20 m)/ P=0,92; 6.-Resistance running at the 1000 m distance/ P=0,05.

Conclusions. The purpose and tasks research have been completed because, after initial and final tests, there is progress, so it appears that the documentary was made good, and the selected samples were representative for their purpose.

Key words: indices, driving qualities, growth, development.

Introduction

Handball game theory and methodology, studying a large sphere of problems relating to the school handball game, at the mass, at the base mass of performance sport level, at the performance and high performance.

The handball game represent a harmonious combination, between natural movements (running, jumping, throwing), on the one hand, and the motor dexterity and ability, simples, attractive and accessible, on the other hand.

At the same time, the handball game be deployed, to the fund of intense psychical solicitations, which have a strong educative and formative character.

The handball game, scientific practiced, are beneficial and important tends to health strengthen, to multilateral develop of physical and mental capacities, to the acquisition of motor dexterity and specific game knowledge, by technical and tactical.

Was developed and a training concept, which suffers changes and improvements continuous, made from studies and theoretical researches, practical and applied.

In conclusion, we can say that the main trend of the handball game, is to be practiced totally of a scientifically bases, and create and implement as a richer technical-tactical baggage, and adapting of the purpose of each competition, namely to score many points in the enemy gate.

It can be said that the main features of the handball game are freedom, the limits of space and time, the effort and pleasure.

As a handball player develop the moral and volitive qualities, discipline, sens of duty, spirit of cooperation with their team-mates, with the referees, coaches and even the public.

As a performance sport, the handball game asks of the participants to make a intensive work, to cope with the tasks of training, very hard, whose solution the maximum strain of all physical, moral and intellectual abilities.

We can say that the handball game learn to the individual to be disciplined, orderly, industriously, self-consciously about collective success, ambitious and eager for self.

The selecting and training work, a handball team, remains and must be one of the basic problems, of the teachers activities from each school, with sport profile or school club, which problem, like importance, will be located at the same level with teaching action performed in the normal lessons and sports training.

Content

It is known that the assumptions are temporary solutions of the scientific research problems. Generally hypothesis represent own uncertainties explanation, in scientific research her

1 Faculty of Physical Education and Sport, Galați University, ROMANIA
Email: cicmadoru@yahoo.com
Received 21.04.2011 / Accepted 11.07.2011
and the unknown enemy.

competition apparition, so the fight sports with a real
preparation level being much improved.

content what be learned, is much wider, and physical
comprehensive training program, tactical and technical
reinforcement.

the game so basically start play of the handball game.

notions of technique and tactics learn the first rules of
stages:

-- third stage – perfected.
-- second stage – advanced;
-- first stage – beginners;

As a result, the entire process of children and
juniors preparation, was divided into the following stages:

-- first stage – beginners;
-- second stage – advanced;
-- third stage – perfected.

In the first stage the children discover first
notions of technique and tactics learn the first rules of
the game so basically start play of the handball game.

So, from the above, show that preparatory
stages to the this echelon, beginners, is learning and
reinforcement.

In the second stage, children will run a more
comprehensive training program, tactical and technical
content what be learned, is much wider, and physical
preparation level being much improved.

This stage corresponds and with official
competition apparition, so the fight sports with a real
and the unknown enemy.

For this stage is defining the consolidation and
learning.

In the third stage, appear two lines defining,
namely game model and training model of the juniors.

Beginning with the performance echelon of
advanced juniors, game models provide progressively
increasing of the technical and tactical baggage, and a
growth indices of development og game specific motor
qualities.

Principle is defined as a basic idea of a
doctrine or thesis, which structure and guiding one
knowledge activity or by practical nature, from which
drift a series consequences in the action plan or
behaviour. (A. Nicu, 1993)

As a general definition, sports training is
defined as “pedagogical process, systematic developed
and continuous gradually by adapting to the physical
efforts of the human body, technical, tactical and
psychical intense, to obtain the best results, one of the
forms of practice in the competitive regime, of physical
exercises.” (I. Kunst Ghermanescu, 1983)

The sports training concept, have subordinates
the training basis, (all laws and principle underlying
and conditioning sports training), established by the
sports training theory (system of principles and
methods which structured and compose sports
training), as training principles (basic ideas by the
pedagogical, psychological, physiological, hygienic
order, and others which structures making and driving
of the training process).

Sports training involves certain components,
namely:

a). educational component, by the teaching
process which operating;

b). biological component, by the objectives
effects in functional development plan and as
adaptative level of human body;

c). psychological component, by the character
features, moral features, emotional features
implications, of the athlete personality;

d). sociological component, by the
relationships and his integration mode and
homogenization, in the social, economic and cultural
environment;

e). hygienic component, by the specific
nutrition conditions, rest, comfort, and by environment
where the athlete is trained and recover;

f). ethical component, by the fair-play ideals,
total employment in training and competition;

Going of the assumption that sports training
is, above all, a teaching process with multiple
implications, we believe is useful to distinguish the
principles into two big category, namely: general
principles and specific principles.

Such sports training theory, present the
following general principles:

-- accessibility principle;
-- continuous effort principle;
-- cyclic structure of effort principle;
-- conscious participation principle;
The specific principles are those which act mainly in sports training, and use them in other activities whose generate a different types of performances.

We can include following specific principles, namely:

-- continuity principle;
-- optimal solicitations and increase or in steps, of the efforts principle;

This principle, expected increasing solicitation degree of the body by the effort increasing, when using the same means or by changing them, the body react strongly to excitatory to them is not normal.

-- priority effort specific competitive principle;

Sports training factors are classified thus:

a). Technical preparation factor is represented by all means with a identical structure or similar, of motor actions provided by the competition rules, by which athlete or team reflected differentiated performance as specific, or more simply, all the means, which by their specific form and content allow to practice of sport branches, according to contest rules and form sport branches technique, those.

b). Tactical training factor involves complex, adequate and effective capitalization a technical and tactical preparation, of a team, in the contest deploy in concordance with conditions of adversity and with predetermined performance objectives, namely title, record, qualification, special place, etc.

c). Theoretical training factor represent “all the information learned from athlete to knowledge and explain all the principle, rules and methods what determined increase effort and performance capacity, and contest or next game anticipating for adequate approach” (A. Nicu, 1993)

This factor is one of the elements through which realise the “invisible training” his tasks being instructive-educative.

d). Psychological training factor, “determined by the training means and with educational actions, increased mental capacity, to allow of athlete deploy of efficiently actions and obtain a superiors results in competitions”. (M. Epuran, 1982)

Driving qualities are body features, materialized in the ability to making of the movement actions with some indices by speed, force, resistance and ability or skill, are one native character whose initial level of manifestation depends by the genetic hereditary fund.

Driving qualities are divided into:

-- Basic motor qualities, speed, force, resistance, ability or skill, to which is added, according with some specialists flexibility and mobility;
-- Specific motor qualities, those involved in the practice of sport branches, or the exercise some professions or trades, them resulting from combining of two or more basic motor qualities.

For each basic motor qualities, exists one specific feature, namely:

1). For speed – rapidity, swiftness;
2). For skill or ability – complexity degree or movement precision;
3). For resistance – effort duration;
4). For force – load.

Speed represents the human ability to execute one move with a greater rapidity and frequency.

Skill is the capacity to achieve and execute necessary movement correctly, quickly adapted to the situation.

Resistance can be defined as the body ability to be laid down with a relatively long duration and relatively high intensity, keeping constant indices, of optimal efficiency.

Force represent the neuromuscular apparatus capacity to defeat one resistance by movement on muscles contraction.

Tasks research were following:

-- action of documentation and information;
-- establish working hypotheses;
-- initial testing of children;
-- completion of the training program;
-- final testing of children;
-- analysis and interpretation of results;
-- establish the conclusions and recommendations.

The experiment being realise in period 20 october 2010 – 15 mars 2011, at high school sports program Brăila.

Anthropometric measurements was: height, weight, scale, length of palm.
Driving and technical samples was:
1. Standing long jump;
2. Speed running on the distance of 30m;
3. Handball ball throwing away with momentum of three steps;
4. Ten steps jump (minimum 20m);
5. Dribbling through cones;
6. Resistance running of the 1000m distance.

Statistic indicators used was:
The sum (∑): \[ \sum = X_1 + X_2 + X_3 + \ldots + X_n \]
The arithmetic media: \[ X = \frac{1}{n} \times (1 \times x_1 + 2 \times x_2 + 3 \times x_3 + \ldots + n \times x_n) \]
The standard deviation (S): \[ S = \sqrt{\frac{\sum (x_i - \bar{x})^2}{n-1}} \]
The coefficient of variability (Cv): \[ Cv = \frac{S}{\bar{x}} \times 100 \]

Values of the variability coefficients may be influenced by some factors such as number of cases and distribution of results.

Motrico-technical test

Table nr. 1

<table>
<thead>
<tr>
<th>Nr. crt.</th>
<th>Name and prename</th>
<th>Speed 30m (sec)</th>
<th>Ten steps jump 20m (m)</th>
<th>Dribbling through cones 30 m (sec)</th>
<th>Standing long jump(m)</th>
<th>Throwing handball ball away (m)</th>
<th>Resistance 1000m (min, sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T₁ T₂ T₃ V₁ T₁ T₂ T₃ V₁ T₁ T₂ T₃ V₁</td>
<td>T₁ T₂ T₃ V₁</td>
<td>T₁ T₂ T₃ V₁</td>
<td>T₁ T₂ T₃ V₁</td>
<td>T₁ T₂ T₃ V₁</td>
<td>T₁ T₂ T₃ V₁</td>
<td>T₁ T₂ T₃ V₁</td>
</tr>
<tr>
<td>1</td>
<td>Manea Cristian</td>
<td>4,7 4,6 4,3</td>
<td>19 21 20</td>
<td>7.8 7.6 7.3</td>
<td>2,18 2,22 2,20</td>
<td>22 23 25</td>
<td>4'30'' 4'25'' 4'20''</td>
</tr>
<tr>
<td>2</td>
<td>Popescu Alin</td>
<td>4,8 4,6 4,3</td>
<td>20 20 20</td>
<td>7.5 7.5 7.3</td>
<td>2,22 2,20 2,20</td>
<td>21 22,5 25</td>
<td>4'50'' 4'40'' 4'20''</td>
</tr>
<tr>
<td>3</td>
<td>Sarcă Florin</td>
<td>4,3 4,3 4,3</td>
<td>18 19 20</td>
<td>7.6 7.4 7.3</td>
<td>2,10 2,15 2,20</td>
<td>20 21,5 25</td>
<td>4'40'' 4'40'' 4'20''</td>
</tr>
<tr>
<td>4</td>
<td>Strungariu Paul</td>
<td>5,2 4,9 4,3</td>
<td>22 22 20</td>
<td>7.9 7.5 7.3</td>
<td>2,05 2,15 2,20</td>
<td>23 23 25</td>
<td>4'20'' 4'20'' 4'20''</td>
</tr>
<tr>
<td>5</td>
<td>Trică Mădălin</td>
<td>4,7 4,5 4,3</td>
<td>17,5 18,5 20</td>
<td>8.1 7.7 7.3</td>
<td>1,95 2,00 2,20</td>
<td>22,5 23 25</td>
<td>4'40'' 4'35'' 4'20''</td>
</tr>
<tr>
<td>6</td>
<td>Frăţilă Ionuţ</td>
<td>4,8 4,7 4,3</td>
<td>18,5 19,5 20</td>
<td>7.7 7.4 7.3</td>
<td>1,90 1,95 2,20</td>
<td>21,5 22 25</td>
<td>5'' 4'45'' 4'20''</td>
</tr>
<tr>
<td>7</td>
<td>Buga Adrian</td>
<td>4,5 4,5 4,3</td>
<td>21 22 20</td>
<td>8.2 7.8 7.3</td>
<td>2,00 2,00 2,20</td>
<td>26 26 25</td>
<td>4'35'' 4'30'' 4'20''</td>
</tr>
<tr>
<td>8</td>
<td>Brânză Georgiun</td>
<td>4,7 4,6 4,3</td>
<td>20 21 20</td>
<td>7.4 7.2 7.3</td>
<td>2,15 2,18 2,20</td>
<td>24,5 25 25</td>
<td>4'10'' 4'10'' 4'20''</td>
</tr>
<tr>
<td>9</td>
<td>Boboc Cristian.</td>
<td>5,0 4,9 4,3</td>
<td>18 19 20</td>
<td>7.6 7.4 7.3</td>
<td>2,00 2,08 2,20</td>
<td>22,5 23,5 25</td>
<td>4'45'' 4'40'' 4'20''</td>
</tr>
<tr>
<td>10</td>
<td>Zamfir Ionuţ</td>
<td>4,8 4,7 4,3</td>
<td>17,5 18,5 20</td>
<td>7.9 7.7 7.3</td>
<td>1,90 1,94 2,20</td>
<td>21,5 22 25</td>
<td>4'25'' 4'20'' 4'20''</td>
</tr>
<tr>
<td>11</td>
<td>Balaban Ionuţ</td>
<td>5,1 4,9 4,3</td>
<td>17 19 20</td>
<td>8.0 7.8 7.3</td>
<td>2,10 2,14 2,20</td>
<td>26 27 25</td>
<td>4'15'' 4'10'' 4'20''</td>
</tr>
<tr>
<td>12</td>
<td>Dogărescu Marius</td>
<td>4,4 4,5 4,3</td>
<td>18 18 20</td>
<td>7.5 7.5 7.3</td>
<td>2,25 2,30 2,20</td>
<td>23 24,5 25</td>
<td>4'45'' 4'30'' 4'20''</td>
</tr>
</tbody>
</table>

Indicator statistic:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>4.75 4.64</td>
</tr>
<tr>
<td>S ±</td>
<td>0.24 0.18</td>
</tr>
<tr>
<td>Cv</td>
<td>5.18 4.05</td>
</tr>
<tr>
<td>P</td>
<td>0.11 0.92</td>
</tr>
</tbody>
</table>
Graphic nr. 1

Speed running - Progress

Graphic nr. 2

Ten steps jump - Progress

Graphic nr. 3

Dribling through couls - Progress
Charts above shows the progress of children juniors third, from initial testing to final testing.

**Conclusions**

The means used, were chosen, selected, measured and then applied to both features of the athletes at this age and on the objectives propose at this level.

Research has found analyzing and systematizing the preparation means, to indices increase development of motor qualities specific handball game, proved to be efficiency and specific means of athletics proposed.

Also research showed that approach training athletes at this echelon, programming and planing training activity, must be done, only after a through knowledge of the students collective with which work, and only after personal training, prior of theoretical and profound scientific basis.

Hypotheses proposed to be verified and demonstrated have been validated, whereas the development indices of motor qualities specific handball game, have increased, results obtained as the control samples, demonstrating that.

It is well supporting control samples, to perform after each period before competition.

It is good that at juniors third level, the teacher-coach, must possess the ability to prepare planning documents, consist of methodologically and detailed records documents.

**References**

