STUDY REGARDING THE DEVELOPMENT OF DEBUTANT VOLLEYBALL PLAYERS’ COORDINATIVE CAPACITY

Teodora WESSELLY¹
Iancu RĂCHITĂ²
Carmen GRIGOROIU NOROCEL³

Abstract

The research aimed to identify the coordinative level of the debutant volleyball players. The approach was conducted on a sample of 70 debutant sport players aged 9 and 12 legitimized within the volleyball department, within were evaluated the coordinative capacity parameters: static balance for handy and clumsy leg, dynamic balance, agility and general coordination.

The coordinative capacity is a crucial point in the training of young volleyball players. A good development of coordinative capacity will enrich the motor luggage of the beginners which will positively reverberate in learning, enhancing and improving of the specific skills.

Keywords: coordinative capacity, volleyball, evaluation, debutants

JEL classification I210, I290, I190

1. Introduction

The volleyball game requires by its nature various and adequate motor skills with fully manifested coordination. It is inconceivable to talk about the improvement of specific motor skills isolated from static and dynamic balance, agility, precision, coordination development. The volleyball specific skills are complex, various difficult to learn and assimilate comparing to the other sports branches. It is very important to build a good coordinative base in order to provide a rich motor luggage, faster and easier learning which will give the opportunity to gain good skills, even perfect ones. These issues being so important for the volleyball game, we must attach a greater importance in early preparation of the young athletes.

2. Material and methods

2.1. Research Aim

The aim of this research is to identify the level of the coordination capacity of the volleyball debutants players.

¹ Universitatea Politehnica din Bucuresti, teodoraw@yahoo.com
² Universitatea Politehnica din Bucuresti, rachitaiancu@yahoo.com
³ Universitatea Politehnica din Bucuresti, Carmen_grigoroiu2015@yahoo.com
2.2. Research Hypothesis
A good and careful selection of rigorous tests and trials will determine the real level of the coordinative capacity development of young volleyball players.

2.3. Research Methods
The research methods used in elaborating the paper are the following: the bibliographic documentation, the direct and indirect observation method, the experiment method, the tests and measurement method, the statistical method, the graphical method. The research instruments used were represented by the following tests and control trials:

- The Bruininks–Oseretsky test for checking the development of the static balance (for handy and clumsy leg);
- The Bass Test for checking the development level of the dynamic balance;
- The Hexagon test for checking the development level of the agility;
- The Matorin test for checking the development level of general coordination capacity.

The statistical and mathematical method of data processing consisted in the processing of the results of the evaluation of function parameters and their interpretation based on existing standard rules. The analysis program included:

- The calculation of the arithmetic average;
- The calculation median line;
- The calculation of the standard deviation;
- The calculation of the mode, maximal and minimal values;
- The coefficient of variation.

2.4. Subjects and location
In order to verify the hypothesis issued, we initiated a pedagogical experiment of verification conducted on a sample of 70 debutant sport players legitimized within the volleyball department from Mircea Eliade Sports Club (28 athletes), School Sports Club no. 2 (10 athletes), School Sports Club no. 5 (15 athletes), Dinamo Bucharest Romprest Sports Club (17 athletes). The testing was conducted in the period 21.06.2012 - 25.06.2012 at „Mircea Eliade” high school gym and the „Lia Manoliu” stadium in Bucharest.

2.5. Results
We present below (Tables No.1) the results obtained by the experimental group at the assessment of the balance capacity (static and dynamic), of the agility and of the general coordination based on the determined statistical indicators: the
arithmetic mean, the median line, the standard deviation, the mode, the maximal and minimal values of the coefficient of variation.

Tab. No. 1 - The assessment results obtained by the experimental group

<table>
<thead>
<tr>
<th>Results</th>
<th>Avrg</th>
<th>Median</th>
<th>St.dev</th>
<th>Mode</th>
<th>Max</th>
<th>Min</th>
<th>Var.co.</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. bal. h leg</td>
<td>3.02</td>
<td>2.70</td>
<td>1.05</td>
<td>2.60</td>
<td>6.80</td>
<td>1.60</td>
<td>34.88%</td>
</tr>
<tr>
<td>St. bal. c. leg</td>
<td>1.98</td>
<td>1.90</td>
<td>0.71</td>
<td>1.90</td>
<td>4.10</td>
<td>0.70</td>
<td>36.18%</td>
</tr>
<tr>
<td>Bass</td>
<td>65.07</td>
<td>65</td>
<td>10.48</td>
<td>60</td>
<td>90</td>
<td>50</td>
<td>16.10%</td>
</tr>
<tr>
<td>Hexagon</td>
<td>18.46</td>
<td>18.75</td>
<td>2.34</td>
<td>19.20</td>
<td>24.30</td>
<td>13.10</td>
<td>12.65%</td>
</tr>
<tr>
<td>Matorin</td>
<td>270.98</td>
<td>260</td>
<td>39.67</td>
<td>240</td>
<td>360</td>
<td>180</td>
<td>14.66%</td>
</tr>
</tbody>
</table>

2.5.1 The analysis of the results obtained at the end of the experiment, indicates the following aspects:

Graph no. 1 The representation of the averages obtained by the components of experimental group at Bruininks–Oseretsky test for handy and clumsy leg

2.5.2. The central tendency of the recorded values for static balance for the dexterous foot is given by the average and median value equal to 3.02 respectively 2.70 seconds. The most frequent result is 2.60, with a share of 9%. The values which reflect the degree of data dispersion around the average are the standard deviation, and the variation coefficient, which are equal to 1.05, respectively 0.35. Based on these values, the sample is in homogeneous compared to the recorded values for this characteristic. For the static balance of the dexterous foot, the players stood on the balancebar an average of 3 seconds of maximum 10, the highest being of 6.8 seconds and the lowest 1.60 seconds. The statements are sustained by the graphical representation of data.

2.5.3. The central tendency of the recorded values for static balance for the clumsy foot is given by the average and median value equal to 1.98 respectively 1.90 seconds. The most frequent result is 1.90, with a share of 13%. The values which reflect the degree of data dispersion around the average are the standard deviation, and the variation coefficient, which are equal to 0.71, respectively 0.36. Based on these values, the sample is in homogeneous compared to the recorded values for this characteristic. For the static balance of the dexterous foot, the players stood on the
balancebar an average of 2 seconds of maximum 10, the highest being of 4.10 seconds and the lowest 0.70 seconds. The statements are sustained by the graphical representation of data.

Graph no. 2 The representation of the averages obtained by the components of experimental group at Bass and Hexagon tests

2.5.4. The central tendency of the recorded values for dynamic balance is given by the average and median value equal to 65.07 respectively 65 points. The most frequent result is 60, with a share of 23%. The values which reflect the degree of data dispersion around the average are the standard deviation, and the variation coefficient, which are equal to 10.48, respectively 0.16. Based on these values, the sample is relatively homogeneous compared to the recorded values for this characteristic. For the dynamic balance, the players obtained an average of 65 points of maximum 100, the highest scored 90 points and the lowest 50 points. The statements are sustained by the graphical representation of data.

2.5.5. The central tendency of the recorded values for agility is given by the average and median value equal to 18.46 respectively 18.75 seconds. The most frequent result is 19.20, with a share of 6%. The values which reflect the degree of data dispersion around the average are the standard deviation, and the variation coefficient, which are equal to 2.34, respectively 0.13. Based on these values, the sample is relatively homogeneous compared to the recorded values for this characteristic. For the agility, the players performed an average of 18.46 seconds, the fastest being of 13.10 seconds and the slowest 24.30 seconds. The statements are sustained by the graphical representation of data.
Graph no. 3. The representation of the averages obtained by the components of experimental group at Matorin test

2.5.6. The central tendency of the recorded values for general coordination is given by the average and median value equal to 270.98 respectively 260 degrees. The most frequent result is 240, with a share of 24%. The values which reflect the degree of data dispersion around the average are the standard deviation, and the variation coefficient, which are equal to 39.67, respectively 0.15. Based on these values, the sample is relatively homogeneous compared to the recorded values for this characteristic. For the general coordination, the players obtained an average of 270.98 degrees, the highest scored 360 degrees and the lowest 180 degrees. The statements are sustained by the graphical representation of data.

Conclusions

Regarding coordination abilities the debutants have been better valued especially in relation to: dynamic balance, agility and general coordination. For the static balance, and both for handy and clumsy leg, the beginners have achieved very poor results.

The coordination capacity being so important both (for the volleyball game and for the learning lessons) it is necessary that the emphasis should be placed upon developing its components.

REFERENCES