Skill performance parameters response to the specific training of adolescent volleyball players

R.G. GIRIDHARAPRASATH and A.S. LOGESWARAN

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Abstract: This study investigated skill performance parameters response to specific training of adolescent volleyball players. To achieve the purpose of the study 30 adolescent male volleyball players were selected from Agarwal matriculation higher secondary school, Coimbatore. The subjects were randomly assigned to two equal groups (n=15). Group- I underwent specific training group (STG) and Group - II was acted as control group (CG). The specific training was given to the experimental group for 3 days per week (Monday, Wednesday and Friday) for the period of twelve weeks. The control group was not given any sort of training except their routine work. The skill performance parameters of serving (Russell lange-volleyball test), volleying (Russell Lange-volleyball test) were assessed before and after training period of 12 weeks the data collected from the subjects was statistically analyzed with ‘t’ test to find out significant improvement if any at 0.05 level of confidence. The result of the serving, volleying speculated significant improvement due to influence of specific training with the limitations of (diet, climate, life style) status and previous training. The result of the present study coincide findings of the investigation done by different experts in the field of sports sciences. Influence of specific training significantly improved serving, volleying of adolescent male volleyball players.

Keywords: Specific Training, Serving, Volleying, Volleyball

- R.G. Giridharaprasath, Department of Physical Education, Bharathiar University, Coimbatore – 641046, Tamil Nadu, India, giridharaprasarth41@gmail.com
- A. S. Logeswaran Department of Physical Education, Bharathiar University, Coimbatore – 641046, Tamil Nadu, India, lokshaas83@gmail.com

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1. Introduction

The primary objectives of sports training are positive adaptation and enhancement of sporting performance. Specific training for volleyball players to concentrate on skills and drills. The fundamental skills are the penalty in any game. If you want to achieve high-level performance in sports and games, you must develop your basic skills. Therefore, every player must know the importance of perfecting the basic skills, from this we can understand that only a player. The game of volleyball is very complicated in terms of skills and teamwork. In this game, everyone should master their own fundamental skills like serving, spiking, and spiking etc. high level of performance need high level execution of fundamental skills. Every sport needs specific training to develop their skills and playing ability. According to Singh [1], whenever a sportsman does an action, he has achieved some performance. During training, a sportsman is regularly doing different types of exercises. An estimate of his performance in different exercises is indispensable for training and performance analysis. Based on this observation, this study was made.

1.1 Hypothesis

The hypothesis argued in this paper is that adolescent male volleyball players can significantly increase the Serving and Volleying ability by the influence of specific training.

2. Materials and methods

2.1 Participants

In order to address the hypothesis presented herein, we selected 30 adolescent male volleyball players from Agarwal matriculation higher secondary school, Coimbatore. The subjects were randomly assigned to two equal groups (n=15). Group-I underwent specific training group (STG) and group-II was acted as control group (CG). Specific training was given to the experimental group for 3 days per week (Monday, Wednesday, and Friday) for the period of twelve weeks. The control group was not given any sort of training except their routine work.

2.2 Research Design

Pre and post random group design was employed. The evaluated skill performance parameters were serving assessed by Russell Lange-volleyball test and the unit of measurement was in points and volleying assessed by Russell Lange-volleyball test the unit of measurement was in seconds. The parameters were measured at baseline and after 12 weeks of specific training after small side were examined.

2.3 Training Protocol

The training programme lasted for 45 minutes for session in a day, 3 days in a week, for a period of twelve weeks. These 45 minutes included 10 minutes warm up, 25 minutes specific, and 10 minutes warm down. Every three weeks of training 5% of intensity of load was increased from 65% to
80% of work load. The equivalent in specific training is the length of the time each action in total 3 day per weeks (Monday, Wednesday and Friday).

2.4 Statistical Analysis

The collected data before and after training period of 12 weeks on the selected variables due to the effect of specific training was statistically analyzed with ‘t’ test to find out the significant improvement between pre and post test. In all cases the criterion for statistical significance was set at 0.05 level of confidence. (P < 0.05)

3. Results

Table – 1. Computation of ‘t’ ratio on selected skill performance parameters of adolescent volleyball players on experimental group and control group

(Scores in numbers)

<table>
<thead>
<tr>
<th>Group</th>
<th>Variables</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>‘t’ ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental Group</strong></td>
<td>SA</td>
<td>Pre test</td>
<td>37.13</td>
<td>15</td>
<td>5.51</td>
<td>1.52</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post test</td>
<td>43.13</td>
<td>15</td>
<td>5.84</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VA</td>
<td>Pre test</td>
<td>17.80</td>
<td>15</td>
<td>1.69</td>
<td>0.74</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post test</td>
<td>22.33</td>
<td>15</td>
<td>2.19</td>
<td></td>
</tr>
<tr>
<td><strong>Control Group</strong></td>
<td>SA</td>
<td>Pre test</td>
<td>37.73</td>
<td>15</td>
<td>4.72</td>
<td>0.456</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post test</td>
<td>36.86</td>
<td>15</td>
<td>4.42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VA</td>
<td>Pre test</td>
<td>17.33</td>
<td>15</td>
<td>3.35</td>
<td>0.37</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post test</td>
<td>16.60</td>
<td>15</td>
<td>2.82</td>
<td></td>
</tr>
</tbody>
</table>

*S*Significant level 0.05 level degree of freedom (2.14,1 and 14)

SA – Serving ability, VA – Volley ability

Table 1 reveals the computation of mean, standard deviation and ‘t’ ratio on selected skill performance parameters namely serving ability and volley ability of experimental group. The obtained ‘t’ ratio on serving ability and volley ability were 37.13 and 43.13 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained ‘t’ values were greater than the table value it was found to be statistically significant.
Further the table the computation of mean, standard deviation and ‘t’ ratio on selected skill performance parameters namely serving ability and volley ability of experimental group. The obtained ‘t’ ratio on serving ability and volley ability were 37.13 and 43.13 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained ‘t’ values were greater than the table value it was found to be statistically not significant.

Figure – 1. Bar diagram showing the mean value on selected skill performance parameters of adolescent volleyball players on experimental group and control group (Scores in numbers)

4. Discussion

The present study experimented the impact of twelve weeks specific training on the selected skill performance variables of adolescent volleyball players. The results of this study indicated that specific training is more efficient to bring out desirable changes over the serving ability and volleying ability of adolescent volleyball players. In the present study, specific training improved serving ability and volleying ability by over 16.15% and 25.44% respectively by findings significant difference when comparison between baseline and post line.

However, there were no statistically significant changes in serving ability and volleying ability of control group. The finding of the present study had similarity with the findings of the investigators referred in this study. Skill-based conditioning is increasingly being used as a means of improving the performance of athletes from skill-based sports. Gabbet [2] has concluded that skill-based conditioning compared with traditional conditioning has contributed to a reduced rate of injuries, which is of great importance for competitive players. Nebojs et al., [3] concluded that preseason skill-based conditioning program does not offer a sufficient stimulus for volleyball players. Shaik et al.,[4] concluded that experimental group significantly improved on skill variables.
5. Conclusions

Based on the findings and within the limitation of the study it is noticed that practice of specific skill training helped to improve selected skill performance of adolescent male volleyball players. It was conducted that the significant improvement in the serving and volleying ability of adolescent male volleyball players due to the influence of specific training. Further, it also conducted that the eight weeks of specific skill training significant improvement in the selected skill performance of adolescent male volleyball players.

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Conflict of interest

The authors declare no conflict of interest.

References


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