IMPACT OF PLYOMETRIC AND TABATA TRAINING ON SPEED ENDURANCE AND VITAL CAPACITY AMONG MEN VOLLEYBALL PLAYERS

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ABSTRACT

The assessment comprises of inspecting the impact of plyometric preparing and tabata preparing on speed perseverance and as far as possible in male volleyball players. To get the justification behind the assessment, 45 (N = 45) male volleyball players as subjects from the Sivagangai district, Tamil Nadu, India, matured 17-21 years developed voluntarily. Three gatherings of fifteen subjects each were chosen as test bunch A, plyometric preparing bunch, test bunch B, tabata preparing gathering, and gathering C, control bunch. Subjects were assessed following two months (two months) of experimentation. The preparation convention was joined by satisfactory warm-up and cool-down programs. For speed perseverance, 300 meter running distance and basic force top stream rate estimation are utilized as test. Educational information of the exploratory and control bunches with benchmark and last readings were measurably examined with examination of change (ANOVA). The certainty level is set at 0.05. After the impact of the review, plyometric preparing and tabata preparing showed better consequences for speed perseverance and essential limit, they showed better improvement.

Keywords: Plyometric Training, Tabata Training, Speed Endurance, Vital Capacity, Men Volleyball Players.

I. INTRODUCTION

Sport is all forms of physical activity which, through casual or organized participation, aim to use, maintain or improve physical fitness and provide entertainment to participants. Performance in sports and games depends on both physical and mental abilities

Plyometric practice is a well-known type of preparing used to work on athletic execution. It includes a stretch of the muscle ligament unit quickly followed by a shortening of the muscle unit. The stretch shortening cycle measure essentially improves the capacity of the muscle ligament unit to deliver maximal power in the most limited measure of time.

Tabata is a type of extreme cardio exercise that constrains you to work at an exceptionally focused energy for brief timeframes. Dr. Izumi Tabata, an educator at the Faculty of Sport and Health Science at Ritsumeikan University in Japan was alongside the lead trainer of the Japanese speed skating crew focused energy practice during the mid 1990s. Tabata preparing is a more serious type of aerobics that incorporates a blend of both cardio and opposition preparing works out. The entire body moves and takes a stab at switching back and forth among upper and lower body moves so one muscle bunch rests while another works.

II. METHODOLOGY

For accomplishing the point of the review 45 (N=45) men volleyball players were chosen haphazardly as subjects from Sivagangai locale, TamilNadu, India matured between 17 to 21 years at arbitrary. Three gatherings with fifteen subjects each were chosen as trial bunch A - plyometric preparing bunch, trial bunch B-tabata preparing and bunch C-control bunch. The subjects were tried prior and then afterward the two months (two months) of experimentation. The plyometric preparing and the tabata preparing were chosen as preparing convention. The underlying and the last readings got from the test and the benchmark group went through a strategy of...
measurable investigation utilizing ANOVA. The IBM-SPSS – v21 programming was utilized and the certainty level is kept up with at 0.05.

### III. RESULTS AND DISCUSSIONS

Descriptive analysis of experimental groups and control group on Speed Endurance and Vital Capacity

<table>
<thead>
<tr>
<th>TABLE I</th>
<th>Descriptive analysis of experimental groups and control group on Speed Endurance and Vital Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed endurance</td>
<td></td>
</tr>
<tr>
<td>Test</td>
<td>Plyometric Training Group</td>
</tr>
<tr>
<td>Pre Test</td>
<td>47.38</td>
</tr>
<tr>
<td>Post Test</td>
<td>46.67</td>
</tr>
<tr>
<td>Vital capacity</td>
<td></td>
</tr>
<tr>
<td>Test</td>
<td>Plyometric Training Group</td>
</tr>
<tr>
<td>Pre Test</td>
<td>3.43</td>
</tr>
<tr>
<td>Post Test</td>
<td>3.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE II:</th>
<th>ANOVA on Speed Endurance and Vital Capacity of Experimental Groups and Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed Endurance</td>
<td></td>
</tr>
<tr>
<td>Test</td>
<td>Sum of square</td>
</tr>
<tr>
<td>Pre Test</td>
<td>.169</td>
</tr>
<tr>
<td>Post Test</td>
<td>11.54</td>
</tr>
<tr>
<td>Vital Capacity</td>
<td></td>
</tr>
<tr>
<td>Test</td>
<td>Sum of square</td>
</tr>
<tr>
<td>Pre Test</td>
<td>.001</td>
</tr>
<tr>
<td>Post Test</td>
<td>.083</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level of confidence

The above table shows I and II that the pre-test mean qualities on speed perseverance of plyometric bunch, tabata gathering and control bunch were 47.38, 47.45 and 47.53 separately. The got F-proportion of .074 for pre-test was lesser than the table worth 3.22 for df2 and 42 needed for importance at 0.05 degree of certainty on speed perseverance.

The post-test mean qualities on speed perseverance of plyometric bunch, tabata gathering and control bunch were 46.67, 46.33 and 47.53 separately. The got F-proportion of 5.13* for post-test was more prominent than the table worth 3.22 for df2 and 42 needed for importance at 0.05 degree of certainty on speed perseverance.

The above table I and II shows that the pre-test mean qualities on imperative limit of plyometric bunch, tabata gathering and control bunch were 3.43, 3.42 and 3.44 separately. The got F-proportion of .077 for pre-test was lesser than the table worth 3.22 for df2 and 42 needed for importance at 0.05 degree of certainty on essential limit.

The post-test mean qualities on imperative limit of plyometric bunch, tabata gathering and control bunch were 3.50, 3.54 and 3.43 separately. The got F-proportion of 5.85* for post-test was more prominent than the table worth 3.22 for df2 and 42 needed for importance at 0.05 degree of certainty on imperative limit.

Cone Diagram of Speed Endurance
IV. CONCLUSION

Volleyball explicit plyometric preparing includes practices that require maximal power in brief time frame stretches subsequently working on the competitor's exhibition. Like plyometric preparing exploits the stretch-abbreviate cycle to foster force. Nonetheless, plyometric preparing accentuates the expectation, speed and proceeded with speed increase of the concentric period of activities, as opposed to the capacity and use of flexible energy to work on the athletic abilities of competitors.

Tabata preparing, a scope of burdens can be utilized so that force, pace of power advancement, and engine unit enlistment, just as intra-and between solid coordination can be created across the power speed bend. These elements might upgrade the unique correspondence of this technique for preparing. Tabata programs are arranged appropriately, working from dumped to stacked, and just attempted after satisfactory strength levels have been accomplished. The plyometric preparing and tabata preparing has showed better execution on speed perseverance and indispensable limit likewise it showed better improvement.

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REFERENCES


15. Prasanna, T. A. persuade of mobility exercise and circuit resistance training on selected speed endurance and explosive power among college men students.Strad Research, ISSUE 8, 2020 ISSN: 0039-2049 https://doi.org/10.37896/str7.8/03