Study of relationship among selected physical fitness component of badminton male players

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Abstract
The purpose of the study was to find out the relationship among selected physical fitness components of badminton male players. Total three hundred male badminton players (Haryana 150 and Delhi 150) of 18-25 years age were randomly selected from different badminton academies and different colleges of Haryana and Delhi state. Only selected physical fitness components i.e. the speed, explosive strength and agility were measured by using respective techniques and equipments. To find out the relationship Karl Pearson coefficient of correlation movement method was applied. The level of \( p \leq 0.05 \) was considered significant.

Keywords: Physical fitness, Haryana, Delhi, badminton

1. Introduction
Fitness in the human body what fine tuning is to an engine. It enables us to perform up to our potential. Fitness can be described as a condition that helps us for better look, pleasant feel and do our best. More specifically, it is “the ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure time activities and meeting emergency demands. It is the ability to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is a major basis for good health and well being” (Singh., 1991) [24].

1.1 Objective of the study
1. To find out the relationship among selected physical fitness component between Haryana and Delhi badminton male players.

2. Methodology
Total three hundred male badminton players (Haryana 150 and Delhi 150) of 18-25 years age were randomly selected from different badminton academies and different colleges of Haryana and Delhi state. Only selected physical fitness components i.e. the speed, explosive strength and agility were measured by using respective techniques and equipments. To find out the relationship Karl Pearson coefficient of correlation movement method was applied.

3. Results and Interpretation
Table 1: Coefficient of correlation between speed and other component of fitness of Haryana and Delhi badminton male players

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Components Correlated</th>
<th>( r )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Speed with explosive strength</td>
<td>.159*</td>
</tr>
<tr>
<td>2.</td>
<td>Speed with Agility</td>
<td>.041</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level

It may be observed from table 1 that there were significant relationship between speed and other component of physical fitness namely explosive strength \( r = .159^* \) whereas there were insignificantly relationship between speed and other component of physical fitness namely agility .041 of the male badminton players of Haryana and Delhi. The graphical representation of data has been shown in figure 1.
Table 2: Coefficient of correlation between explosive strength and other component of fitness of Haryana and Delhi badminton male players

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Components Correlated</th>
<th>(r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Explosive strength and Agility</td>
<td>-.099</td>
</tr>
<tr>
<td>2</td>
<td>Explosive strength and Speed</td>
<td>.169*</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level

It may be observed from table 2 that there were significant relationship between explosive strength and other component of physical fitness namely speed .169*. Whereas there were insignificantly relationship between explosive strength and other component of physical fitness namely agility -.099 of the male badminton players of Haryana and Delhi.

The graphical representation of data has been shown in figure 2.

Fig 2: Graphical representation of Coefficient of correlation between explosive strength and other component of fitness of Haryana and Delhi badminton male players

Table 3: Coefficient of correlation between agility and other component of fitness of Haryana and Delhi badminton male players

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Components Correlated</th>
<th>(r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agility and Explosive strength</td>
<td>-.078</td>
</tr>
<tr>
<td>2</td>
<td>Agility and Speed</td>
<td>-.021</td>
</tr>
</tbody>
</table>

It may be observed from table 3 that there were insignificant relationship between agility and other component of physical fitness namely explosive strength and speed of the male badminton players of Haryana and Delhi.

The graphical representation of data has been shown in figure 3.

Fig 3: Graphical representation of Coefficient of correlation between agility and other component of fitness of Haryana and Delhi badminton male players

4. Conclusion
1. Speed component of physical fitness was significantly related with other component of physical fitness i.e. explosive strength of Haryana and Delhi badminton male players. Whereas speed did not show any statistically significant coefficient of correlation with agility of Haryana and Delhi badminton male players.
2. Explosive strength component of physical fitness was significantly related with other component of physical fitness i.e. speed of Haryana and Delhi badminton male players. Whereas agility did not show any statistically significant coefficient of correlation with arm and shoulder strength of Haryana and Delhi badminton male players.
3. Agility component of physical fitness did not show any statistically insignificantly coefficient of correlation with speed and explosive strength of Haryana and Delhi badminton male players.

5. References