A comparative study of coordinative abilities between high level and low level female players

Dharmender

Abstract

The present study has been designed to investigate the coordinative abilities between high level (state and inter collegiate position holder, inter university and national participation level) and low level (Inter collegiate and state participants) female players. For accomplish the study total 60 female players (30 high level players and 30 low level players were selected through random sampling as subjects of this study. All the samples were selected from various colleges/Clubs of Haryana State, who participated in different teams of Haryana state and universities (football and basketball). The age of the sample were ranged from 18 to 25. In the study only three coordinative ability variables such as agility, balancing ability and rhythmic ability are taken into account. For measuring the agility zig-zag running test, for measuring the balancing ability beam walk test and for measuring rhythmic ability rhythmic ability test was used. To accomplish the study SPSS version 20 was used to apply all statistical terms and t test was applied to compare the results. The level of significance was set at 0.05. No significant difference was observed in agility ability and Rhythmic ability between high level and low level female players. A significant difference was observed in balancing ability between high level and low level female players.

Keywords: Rhythmic ability, zig-zag running, coordinative ability, inter collegiate, inter university

Introduction

Coordination ability means an ability to quickly and purposefully perform difficult spatio-temporal movement structures. Within this context, coordination abilities are understood as an externally visible manifestation of the control and regulation processes of the motor activity of the central nervous system. Coordination the ability to solve complicated movement tasks with accuracy and ease. Coordination is moving with seamless precision in whatever your desired movement? If you have been in an accident or been otherwise severely injured or impaired coordination can be the ability to simply put on your own socks? Coordination is both foundational and also necessary and appropriate at very advanced levels of training. From the strength and conditioning perspective the athlete needs the coordination to perform the strength, power and speed exercises optimally. In many sports the coordination demands is way higher in the sport than in the strength and conditioning training. In those cases it is very difficult to properly challenge coordination in strength and conditioning.

Objectives of the study

- The main objective of the study is to compare the coordinative abilities between high level and low level female players.

Hypothesis of the study

- There would be no significant difference in agility ability between high level and low level female players.
- There would be no significant difference in balancing ability between high level and low level female players.
- There would be no significant difference in Rhythmic Ability between high level and low level female players.
Research process and methodology

- The sample for the present study was total 60 female players (30 high level players and 30 low level players were selected through random sampling as subjects of this study.
- Female players who participate at state and inter collegiate position holder, inter university and national participation level were selected as high level players while female players who participate at Inter collegiate and state level were selected as low level players.
- All the samples were selected from various colleges/Clubs of Haryana State, who participated in different teams of Haryana state and universities (football and basketball).
- Only three coordinative ability variables such as agility (Zig-Zag Run Test), balancing ability (Beam walk Test) and rhythmic ability (Rhythmic Ability Test) are taken into account.
- The age of the sample were ranged from 18 to 25.

Tools and techniques

To compare the various coordinative abilities of various level of male and female team game players, the investigator will be used the following test terms-

Test No.1: Zig-Zag Run Test

Purpose: To measure Agility Ability

Equipment: 5 wooden sticks to mark the figure of eight, Stop watch and recording sheets.

Procedure: Fix all the five wooden sticks in eight figures in such a way so that the runner will run around above the wooden stick in eight figures. The length of the rectangular area is 16 feet and the width of the area is 10 feet. One sticks fixed in the center of all the four sticks as shown in the figure below. The player will start running from staring line on whistle and complete three round in one stretch around the prescribed path of 8 figures. Time of the subject to complete three rounds was taken and recorded in seconds.

Test No.2-Beam walk Test

Purpose: To measure balancing ability

Equipments: A beam of 5mts fixed at a height of 1.20mts, stop watch etc.

Procedure: The subjects stands at one end of the beam, on the signal ‘Go’ she start walking on the beam, reaches at the other and of the beam and immediately returns to the starting end, and jumps down the beam. On the signal ‘GO’ the time is started and at the end of the jump the time is stopped.

Test No.3 – Rhythmic Ability Test

Purpose: To measure Rhythmic Ability

Equipments: Marked rectangular area of 6mts x 2mts with each strip of 1mts width. 4th and 6th strip divided into two equal halves, stop watch.

Procedure: The subject will stand at the centre of the Marking ground behind the starting line on whistle the subject will start stepping on right leg in strip 1 to 3 & 5 with both the legs in strip No. 4 & 6 jump on strip 6 to about turn on both legs and repeat jumping on right leg back to the starting line in the same way of going up.

Scoring: The time noted down from start of finishing of all the column is taken and recorded in seconds.

Statistical method
- The obtained data were analyzed by applying t test in order to determine the coordinative abilities of high level and low level female players.
- The level of significance was set at 0.05.

Table 1: Mean difference between high level and low level female players in their agility (N = total numbers of students)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group Statistics Zig-Zag Running Test</th>
<th>d.f</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>T value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agility</td>
<td>High Level Female Players</td>
<td>30</td>
<td>7.09</td>
<td>0.62</td>
<td>.11</td>
<td>1.40**</td>
</tr>
<tr>
<td></td>
<td>Low level female players</td>
<td>30</td>
<td>7.30</td>
<td>0.53</td>
<td>.09</td>
<td></td>
</tr>
</tbody>
</table>

**(not significant at 0.05 level)

Table 2: Mean difference between high level and low level female players in their balancing ability (N = total numbers of students)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group Statistics Beam Walking Test</th>
<th>d.f</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>T value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balancing Ability</td>
<td>High Level Female Players</td>
<td>30</td>
<td>8.20</td>
<td>2.91</td>
<td>.53</td>
<td>2.32*</td>
</tr>
<tr>
<td></td>
<td>Low Level Female Players</td>
<td>30</td>
<td>6.80</td>
<td>1.58</td>
<td>.28</td>
<td></td>
</tr>
</tbody>
</table>

*(significant at 0.05 level)

Table 3: Mean difference between high level and low level female players in their rhythmic ability (N = total numbers of students)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group Statistics Rhythmic Ability Test</th>
<th>d.f</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>T value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhythmic Ability</td>
<td>High Level Female Players</td>
<td>30</td>
<td>4.95</td>
<td>.98</td>
<td>.18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low Level Female Players</td>
<td>30</td>
<td>4.51</td>
<td>.85</td>
<td>.15</td>
<td>1.81**</td>
</tr>
</tbody>
</table>

**Not significant at 0.05 level

Table 1. Shows that ‘t’ value (1.40**). The mean score of high level female player is lower than low level female players. The mean score of high level female player is (7.09) is lower than the mean score of low level female player (7.30), which shows no significant difference. t value 1.40 is lower than the table value 0.05. So significantly there is no difference in agility abilities of high level and low level female players.
Table 2. Shows that ‘t’ value (2.32*). The mean score of high level female player is higher than low level female players. The mean score of high level female player is (8.20) is lower than the mean score of low level female player (6.80), which shows A significant difference. t value is 2.32 higher than the table value 0.05. A significant difference was observed in balancing ability between high level and low level female players.

Table 3. Shows that ‘t’ value (1.81**). The mean score of high level female player is higher than low level female players. The mean score of high level female player is (4.95) is higher than the mean score of low level female player (4.51), which shows no significant difference. t value 1.81 is lower than the table value 0.05. So significantly there is no difference in Rhythmic abilities of high level and low level female players.

![Bar Chart](chart.png)

**Fig 1:** Mean difference between high level and low level female players in their coordinative ability

**Result**

No significant difference was observed in agility ability and Rhythmic ability between high level and low level female players. A significant difference was observed in balancing ability between high level and low level female players. we can say that balance ability capacity is more in high level female players in comparison of low level female players, so the hypothesis which was formulated earlier that “There would be no significant difference in agility ability and Rhythmic Ability between high level and low level female players” was accepted While hypothesis that “There would be no significant difference in Rhythmic Ability between high level and low level female players” was rejected.

**References**