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

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Abstract

The present study has been designed to investigate the physical fitness 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 physical fitness variables such as speed, strength and endurance are taken into account. For measuring the speed 50 Yard Dash test, for measuring the strength Standing Broad Jump test and for measuring endurance 12 minute Run and walk 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 speed ability and strength ability and endurance ability between high level and low level female players.

Keywords: Endurance, 50 m dash run, standing broad jump, physical fitness ability

Introduction

A person who is fit can live life to its fullest extent. The physical and mental form play a very important role in their lives and people who are in good physical and mental form are less prone to medical conditions. People who are in good physical shape are also healthier, can maintain their optimal weight and are not prone to heart or other problems. To maintain a relaxed state of mind, a person must be physically active. A person who is fit both physically and mentally is strong enough to face the ups and downs of life, and is not affected by drastic changes if they occur. Physical activity offers long-term health benefits for everyone! By being active, you will burn the calories you store while eating during the day and it can be as easy as walking with the dog or as rigorous as running a marathon. Providing children with the opportunity to be active soon puts them on the path to better physical and mental health. It's never too late to start a healthy lifestyle.

Objectives of the study

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

Hypothesis of the study

- There would be no significant difference in Speed ability between high level and low level female players.
- There would be no significant difference in Strength ability between high level and low level female players.
- There would be no significant difference in Endurance 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.

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- 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 physical fitness variables such as speed (50 M dash run), strength (standing broad jump) and endurance (1.5 mile or 2200 miters Run) are taken into account.
- The age of the sample were ranged from 18 to 25.

Tools and techniques

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

50 yard dash

Purpose: To measure Speed.

Description: For the 50 Yards Dash Test the student assumes a standing start behind the restraining line. Use the commands are you ready? And Go!, timing the latter signal with a downward sweep of the arm. The student runs as fast as possible, without slowing down until he or she crosses the finish line. Tie stopwatch is started as the starter's arm reaches the downward position and is stopped as the finish line is crossed. Two trials are taken.

Equipment: One stopwatch is essential; using two watches or a split-second timer for simultaneous testing of two students is recommended.

Scoring: Record the time in seconds to the nearest tenth of a second.

12-Minute run and walk test

Test: To measure Endurance.

Description: Instruct the student to use a standing start. Give tie signal Ready, Go!, and start the stopwatch on the signal Go!. Tie student begins running and continues running as fast as possible

Test Area: 400 m track

Equipment: Stopwatch, whistle and assistant.

Scoring: The score is recorded in meters.

Standing broad jump

Purpose: To measure the Strength

Test administration: A demonstration of the standing broad jump is given to a group of subjects to be tested. The subject is ten asked to stand behind the starting line with the feet parallel to each other. He is instructed to jump as farthest as possible by bending knees and swinging arms to take off for the broad jump in the forward direction. The subject is given three trials.

Equipments: Floor, mat or long jump pit may be used, measuring tape, marking tape/chalk or a peg.

Scoring: The distance between the starting line and the nearest point of landing provides the score of the test. The best trial is used as the final score of the test.

Statistical method

- The obtained data were analyzed by applying t test in order to determine the physical 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 speed ability, (N = total numbers of students)

Group Statistics 50 M dash run Test							
Variable	Group	N	d.f	Mean	Std. Deviation	Std. Error Mean	T value
Speed	High Level Female Players	30		6.43	1.72	.31	1.22**
	Low Level Female Players	30	58	5.96	1.24	.22	

**Not Significant at 0.05 level

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

Group Statistics standing broad jump test							
Variable	Group	N	d.f	Mean	Std. Deviation	Std. Error Mean	T value
Strength	High Level Female Players	30		1.76	.26	.04	1.06**
	low level female players	30	58	1.99	1.14	.20	

**Not Significant at 0.05 level

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

Group Statistics 1.5 mile or 2200 miters Run Test							
Variable	Group	N	d.f	Mean	Std. Deviation	Std. Error Mean	T value
Endurance	High Level Female Players	30		2489.33	562.78	102.75	1.06**
	Low Level Female Players	30	58	2367.33	275.42	50.28	

**Not Significant at 0.05 level

Table 1. Shows that ‘t’ value (1.22**). The mean score of high level female player is Higher than low level female players. The mean score of high level female player is (6.43) is higher than the mean score of low level female player (5.96), which shows no significant difference. t value 1.22 is

lower than the table value 0.05. So significantly there is no difference in speed ability of high level and low level female players.

Table 2. Shows that ‘t’ value (1.06**). The mean score of high level female player is lower than low level female

players. The mean score of high level female player is (1.76) is lower than the mean score of low level female player (1.99), which shows no significant difference. t value 1.06 is lower than the table value 0.05. So significantly there is no difference in strength ability of high level and low level female players.

Table 3. Shows that ‘t’ value (1.06**). The mean score of

high level female player is higher than low level female players. The mean score of high level female player is (2489.33) is higher than the mean score of low level female player (2367.33), which shows no significant difference. t value 1.06 is lower than the table value 0.05. So significantly there is no difference in endurance ability of high level and low level female players.

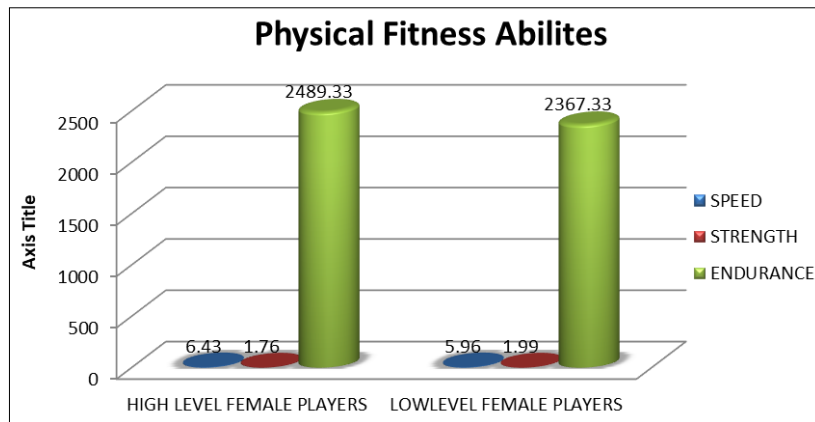


Fig 1: Mean difference between high level and low level female players in their physical ability

Result

No significant difference was observed in speed ability and strength ability and endurance ability between high level and low level female players. The hypothesis which was formulated earlier that “There would be no significant difference in speed ability and strength Ability and endurance ability between high level and low level female players” was accepted.

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