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## A comparative study of physical fitness among football players and middle distance runners

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### Abstract

The analytic study of physical fitness is an important, moderate factor in new sports era. The physical fitness is a key component of an individual performance. Which enables a performer to give his best, physical fitness is a resource, and essential require among the players to give his best. Without physical fitness a player cannot able to perform well by physic. Hence in the modern sports physical fitness has become a great importance. To achieve physical fitness player requires a great intensity exercises and moderate intensity activities on grounds and gym activities too. The one who had physically fit and strong can player all sports and games. In today's sports fitness component is a key factor it is the job of the trainers and trainees to assume high virtuality fitness, and the training methods.

**Keywords:** fitness, strength, exercise, training, sports, endurance, power

### Introduction

The purpose of introducing physical fitness is a necessary task in day to day life of an individual because of these fitness helps as to perform any activities by physical and mental. All living individuals and sports personalities have some degree of physical fitness and their endurance in physical activities. Physical fitness depends on the co – ordination functioning of the various physiological systems the processes of the various physiological systems. The process of getting fir and keeping fit is a more matter of communicate and self-disciplining, then hard work.

Broadly speaking fitness is the ability to do our daily task without under fatigue, physical fitness will be general and specific physical fitness, it can be health and skill related physical fitness in terms fitness implies soundless of body organs such as the heart and lungs. Physical fitness will help to develop muscular co- ordination of internal organs well. Physically his objectivity is to execute efficiency skill of any time under any situation for last duration.

### Subject Selection

The subjects are elected in the test are based on physical fitness test called American AAPHER youth fitness test.

### Materials and the Methods Used for the Test

To achieve this purpose be selected 25 middle distance runners and 25 football players in each discipline. Here we used the American association for health physical education and recreation battery to measure the following aspects of physical fitness.

1. Pull ups.
2. Sit-ups.
3. Standing broad jump.
4. Shuttle run.
5. 50 yard dash.
6. 600 yards walk and run test.

### Test administration

Before conducting these tests the subjects were informed of the testing techniques rules and demonstration and orientation before the test.

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**Experimental variables**

Pull-ups, shuttle run, sanding broad jump, 50 yard dash.

**Apparatus**

The following apparatus were used in the study mat, stop watch, two [AAPERS baskets metal bar and measuring tape.

**1. Pull ups test.**

**Equipment**

A metal or wooden bar approximately 1.5 in diameter is preferred.

**Description**

The bar is high enough for the pupil to hang with his arm and legs fully extended and his feet free from the floor. Use the over hand zero. After assuming the hanging position, the pupil raises his body by his arms until his hang as in the starting position. The exercise is repeated as many times as possible.

**2. sit- ups test.**

**Equipment**

Mat, stops watch the right knees,

**Description**

The subject lies on this back either on the floor of on the mat, his fingers interlocked behind his neck and elbow touching the floor, his knees bend and his fetes flat on the floor pulled in close to the body. A partner holds his feet's right elbow to the left knee, return to the stating position, and the sits up touching the left elbow to right knees. The exercise is repeated, as many times as possible in 60 seconds.

**3. Shuttle run.**

**Equipment**

Two parallel lines are marked on the floor 30 feet an art place the blocks of wood behind one of the lines. The pupil starts from being the other line. on the signals ready and go then the pupil runs to the blocks, picks up one , runs back to the starting line and places the block behind the line he then runs back and picks up the second block which he carries back across the starting line. if the scorer has two stop watches roof one with a split second time it is preferable to here two pupils running at the same time, the eliminate the necessity of returning the block after each race, start the race alternately fist from behind one line and then from behind the other.

**4. Standing broad jump.**

**Equipment**

Outdoor jumping pit, measuring tape, chunnam.

Description:

Subjects stand with the feet several inches apart and the toes just behind the take-off line. Preparatory to jump the subject swings the arm backward and bends the knees. Simultaneously extending the knees and swinging forward the arms accomplish the jump.

**5. 50 yard dash.**

**Equipment**

Two stop watches or one with a split second timed.

**Description**

It is preferable to administer this test to two pupils at a time, both behave to take position behind the starting line. the starter will use the command ready go the latter will be accompanied by a downward sweep of the starters arms to give the time a visual signal.

**6. 600 yard walk and run**

**Equipment**

Track or area within a football field or a square 600 yards on each side of a playground, stop watch.

**Description**

Pupil uses a standing start on the signal ready go the subject starts running and covers. The 600 yards distance. The running may be interfered with walking if the subjects tire, it is possible to have a dozen subjects run at one time by each pupil listens for and remembers his partners time as the latter crosses the finish, the times merely calls out the times as the pupil crosses the finish, the timer merely calls out the time as the pupil cross the finish.

The performance in the related variables were scored and recorded as described in the preceding tested ratio was applied to the date to determine if there were any significant difference among the middle distance runners and football players.

**Test significance**

The tests are usually called the tests of significance as have we test as to whether the difference among the middle distance runners and football players scores of the samples are significant or not in the present study, if the obtained values were greater than the expected values at 0.05 levels that the null hypothesis was rejected to the effect that there existed significant difference between the means of the group compared. And if the obtained values were lesser, than required values of 0.05 level that the null- hypotheses was accepted to the effect that the existed no significant difference between the means of the groups under study.

**Table 1:** Comparison of data on pulls ups of middle distance runners and football players

Groups	Mean	Mean difference	S. d.	t- ratio
Middle distance runners	5.28		2.28	
		0.24		0.38
Football players	5.52		2.10	

From the table it is clearer that the difference of the means of middle distance runners and football players wise 0.24 the t ratio obtained from this difference was 0.38 the obtained value of t ratio was more than the table value t ratio 2.08 at

0.5 percent level. Hence the difference was considered as statistically significant and it he was concluded that middle distance runner's war e superior in the matter of pull ups strength that the football players.

**Table 2:** Comparison of data on standing broad jump of middle distance runners and football players

Groups	Mean	Mean difference	S. d.	T ratio
Middle distance runners	1.83		0.16	
		0.07		-1.33
Football players	1.76		0.16	

The obtained t ratio of -1.33 indicated significant differences in favor of the football players at 0.05 level of confidence as the tabulated t ratio was. Hence the difference was considered as insignificant in

standing board jump. So there is no difference between middle distance runners and football players to measure the leg strength.

**Table 3:** Comparison of data on setups of middle distance runners and football players

Middle distance runners	Mean	Mean difference	S. d.	t- ratio
Middle distance runners	20.20		4.16	
		1.56		-1.411
Football players	18.64		3.63	

The obtained t ratio of -1.411 indicated significant differences in four of the middle distance runners at 0.05 level of

confidence as the tabulated t ratio was only. It seems that middle distance runners had superior in abdominal strength.

**Table 4:** Comparison of data on 50 yards dash of middle distance runners and football players

Groups	Mean	Mean difference	S. d.	t- ratio
Middle distance runners	7.56		0.65	
		0.80		4.185
Football players	8.36		0.70	

The difference between the means of middle distance runners and football players was 0.80 the t ratio obtained for this difference was 4.185. the obtained values t ratio was more than the table of t ration [2.04 at 0.051 present level], hence

the difference was considered that middle distance runners were highly significant in the matter of speed that the football players.

**Table 5:** Comparison of data on 600 yards run/walk dash of middle distance runners and foot ball

Groups	Mean	Mean difference	S. d.	T ratio
Middle distance runners	2.01		0.10	
		0.10		1.62
Football players	2.11		0.28	

The difference between the means of the football players and middle distance runners in the physical fitness variables was found to be statistically significant at 0.05 percent level of confidence. From these findings we understand that the middle distance runners are better than football players in all respects. This may be because of daily practice and physical exercise. The 50 yard [0.62] was found to be significant at 0.05 level of confidence.

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**Conclusion**

The middle distance runners possess more physical fitness than football players in all respects the middle distances runners are superior that the football players in almost all physical fitness components.

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