



## **Development of norms for selected physical fitness parameters of male football Midfielders**

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### **Abstract**

Availability of norms for different selection parameters in sports with the view to maintain objectivity is very essential. In the Football context, much research have not been done in this regard. Hence, this study was aimed to develop norms for selected physical fitness parameters of Football Midfielders. A sample of 30 Football Midfielders was recruited purposively from the Guru Nanak Dev University, Amritsar. Subjects were tested for selected physical fitness parameters viz. Muscular strength, Muscular power, Muscular endurance, Running agility, Running speed, Jumping ability, Throwing ability, Flexibility and Balance. Percentile scale was used in order to develop the norms. The scores were ordered in to five grades viz. very poor, poor, average, good and very good.

**Keywords:** norms, physical fitness, football, Midfielders

### **1. Introduction: Football**

Affiliation football, soccer, or basically football is a group activity played between two groups each comprising of eleven players. It is a ball game played on a rectangular grass (some of the time counterfeit turf) field with an objective at each end. The object of the diversion is to score by moving the spheroid ball into the restricting objective. Other than the goalkeepers, players may not utilize their hands or arms to drive the ball when all is said in done play. The victor of the match is the group that has scored most objectives toward the finish of the match. The game is known by numerous names all through the English-speaking world, in spite of the fact that football is the most widely recognized. Different names, for example, affiliation football and soccer, are frequently used to recognize the diversion from different codes of football, since the word football might be utilized to allude to a few very unique amusements.

Football is played at an expert dimension everywhere throughout the world, and a huge number of individuals consistently go to football stadia to pursue their most loved group, while billions all the more energetically watch the amusement on TV. An extensive number of individuals likewise play football at a novice level. As per a survey conducted by Fédération Internationale de Football Association (FIFA), football's overseeing body, distributed in the spring of 2001, more than 240 million individuals routinely play football in excess of 200 nations in all aspects of the world. Its straightforward guidelines and negligible hardware prerequisites have no uncertainty helped its spread and development in fame.

### **Midfielders**

A midfielder is an affiliation football position. Midfielders are for the most part situated on the field between their group's protectors and advances. Some midfielders assume a restrained cautious job, separating assaults, and are also called guarded midfielders. Others obscure the limits, being progressively versatile and productive in passing: they are normally alluded to as profound lying midfielders, play-creators, box-to-box, or holding midfielders. The quantity of

midfielders on a group and their appointed jobs relies upon the group's arrangement; the aggregate gathering of these players on the field is some of the time alluded to as the midfield. Most supervisors dole out somewhere around one midfielder to disturb the restricting group's assaults, while others might be entrusted with making objectives, or have measured up to duties among assault and safeguard. Midfielders are the players who normally venture to every part of the best separation amid a match. Since midfielders ostensibly have the most belonging amid a diversion they are among the fittest players on the pitch.

### **Fitness**

A far reaching work out regime custom-made to an individual commonly centers around at least one explicit abilities, and on age or wellbeing related needs, for example, bone health. Many sources additionally refer to mental, social and passionate wellbeing as a critical piece of by and large fitness. This is frequently displayed in reading material as a triangle made up of three points, which speak to physical, passionate, and mental fitness. Physical wellness can likewise anticipate or treat numerous incessant wellbeing conditions expedited by unfortunate way of life or aging. Working out can likewise enable a few people to rest better and potentially reduce some inclination issue in specific people.

This highlights the greater need of establishing norms for selection of football players in order to make the selection criteria more objective and meritocratic. This study is an attempt to develop the norms for some selected physical fitness parameters with special consideration to the fitness of Midfielders of Football.

## **2. Methods and procedures**

### **a. Selection of subjects and variables**

A sum of thirty (N=30), male college level Football Midfielders between the age gathering of 18-25 years were selected from the different college of the Guru Nanak Dev University, Amritsar, Punjab, India. The purposive sampling technique was utilized to achieve the ideal sample. Physical fitness factors and their particular tests are given in table-1:

**Table 1:** Physical Fitness parameters and their respective tests

Variable	Test	Measuring unit
Muscular strength	Handgrip strength test	Kilograms
Muscular Power	Vertical jump test	Centimeters
Muscular Endurance	Pull-up test	Maximum performed
Running Speed	20 meter dash	Seconds
Running Agility	Illinois agility test	Seconds
Jumping Ability	Standing long jump	Meters
Throwing Ability	Overhead medicine ball throw test	Meters
Flexibility	Sit and reach test	Inches
Balance	Stork balance test	Seconds

**2.2 Statistical Technique**

Descriptive data was expressed as mean and standard deviation. Percentile Scale was used as a statistical tool in order to determine the norms of different variables. Further, the scores were classified into five grades i.e. very good, good, average, poor and very poor.

**3. Results**

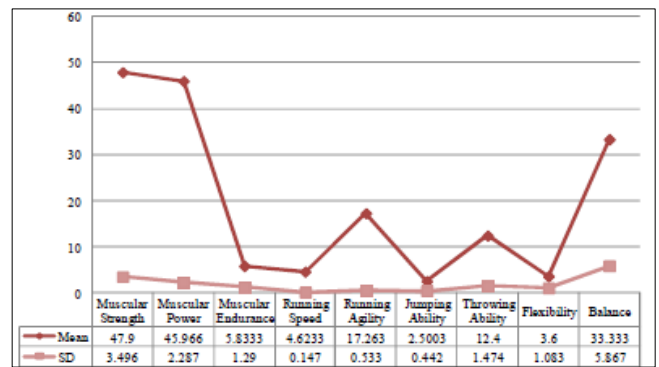
**Table 1:** Descriptive Statistics (Mean & Standard Deviation) and Percentile Plot (Hi & Low) of specific Physical Fitness Test Items of Midfielders (n3=30) for Football Sports Selection.

Sr.	Test Item	Mean ± Standard Deviation		Hi	Low
		Mean	SD		
1	Muscular strength	47.9	3.496	53	41
		47.9	3.496		
2	Muscular power	45.966	2.287	51	42
		45.966	2.287		
3	Muscular endurance	5.8333	1.29	9	4
		5.8333	1.29		
4	Running speed	4.6233	0.147	4.9	4.3
		4.6233	0.147		
5	Running agility	17.263	0.533	18.1	16.4
		17.263	0.533		
6	Jumping ability	2.5003	0.442	3.27	1.60
		2.5003	0.442		
7	Throwing ability	12.4	1.474	15	10
		12.4	1.474		
8	Flexibility	3.6	1.083	5	2
		3.6	1.083		
9	Balance	33.333	5.867	42	24
		33.333	5.867		

Table 1 shows that in Muscular Strength, the mean score was 47.9 and Standard deviation score was 3.496. In Muscular Power, the mean score was 45.966 and standard deviation score was 2.287. In Muscular Endurance, the mean score was 5.8333 And standard deviation score was 1.29. In Running Speed, the mean score was. 6233 and standard deviation score was 0.147. In Running Agility, the mean score & was 17.263 and standard deviation was 0.533. In Jumping Ability, the mean score was 2.5003 and standard deviation was 0.442. In Throwing Ability, the mean score was 12.4 and standard

deviation score was 1.474. In Flexibility, the mean score was 3.6 and standard deviation score was 1.083. In Balance, the mean score was 33.333 and standard deviation score was 5.867 of Midfielders.

**Graphical portrayal of mean and standard deviation of physical fitness parameters**



**Fig 1:** Descriptive Statistics (Mean & Standard Deviation) and Percentile Plot (Hi & Low) of specific Physical Fitness Test Items of Midfielders (n3=30) for Football Sports Selection.

**4. Discussion**

The examination was intended to build up the standards for chose physical wellness factors of Football defenders. Sarkar (2010), in his doctoral research featured the need of foundation of physical wellness standards for Football players playing at different positions. On this record this investigation was expected to develop the standards for chose physical wellness parameters of Football defenders. The after effects of this examination show minor varieties with the standards for the comparative physical wellness parameters of Kabaddi players (Sharma *et al.*, 2014) [5]. This could be because of the shifted idea of these two amusements. Scarcely any different investigations have taken a shot at the improvement of standards for physical wellness parameters as the there is a more prominent need to chip away at this topical territory in various physical training and sports settings (Singh *et al.*, 2014; Sharma, 2017; Singh and Singh, 2013) [1, 4, 5].

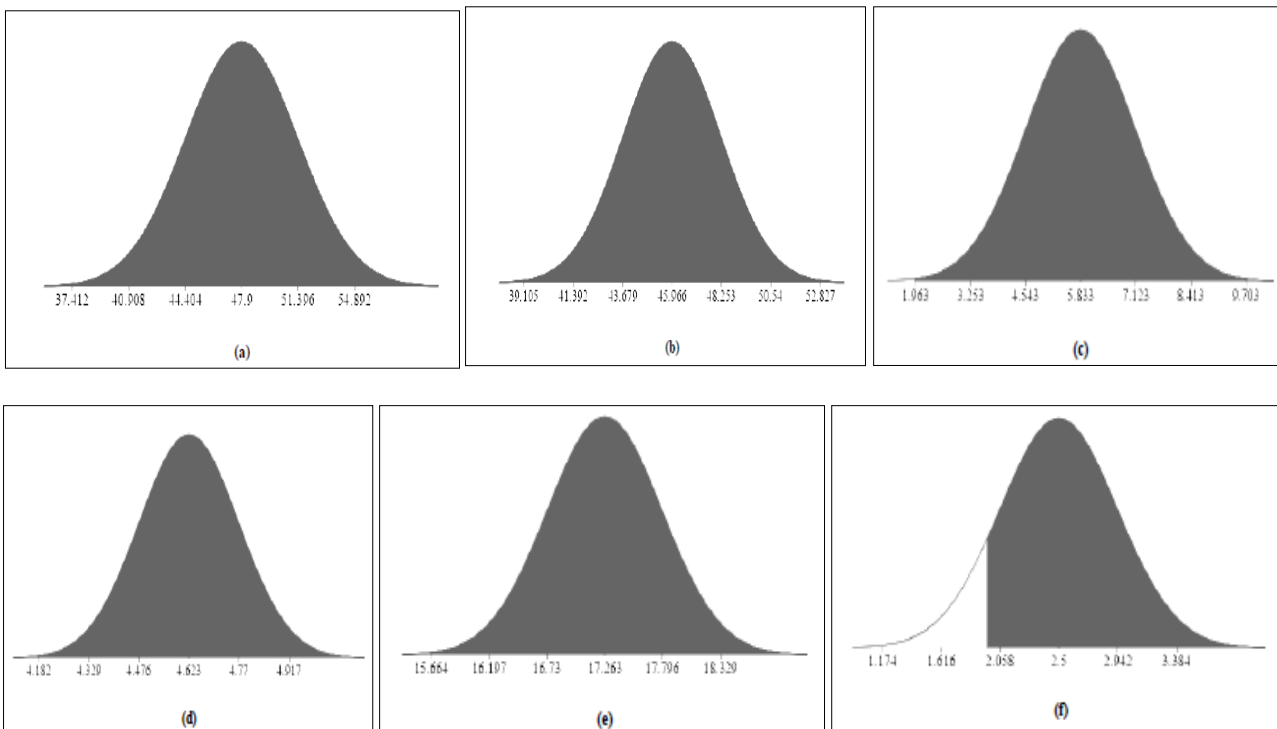
**Grading for Midfielders (n3=30) of guru Nanak Dev university, Amritsar for the specific physical fitness test item. Physical fitness test item.**

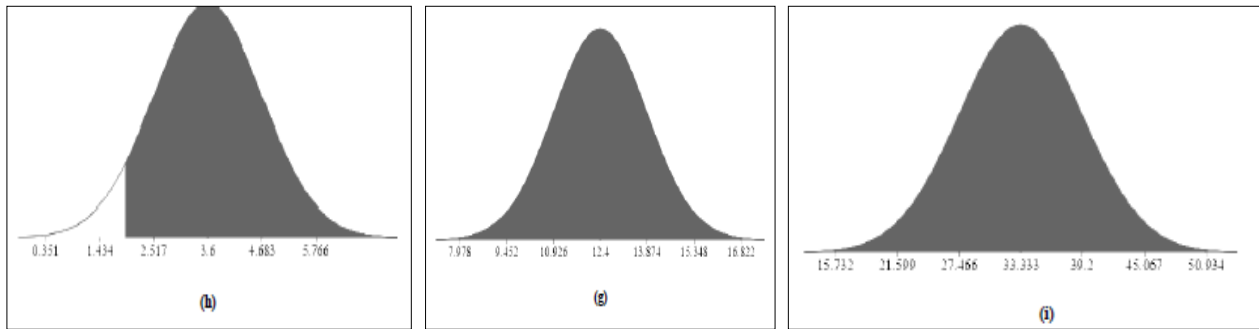
**Table 2**

Test Items	Very Poor	Poor	Average	Good	Very Good
Muscular Strength	Less than (<) 40.908	40.908-44.404	44.404-51.396	51.396-54.892	Greater than(>)54.892
Muscular Power	Less than (<)41.392	41.392-43.679	43.679-48.253	48.253-50.54	Greater than(>)50.54
Muscular Endurance	Less than (<)3.253	3.253-4.543	4.543-7.123	7.123-8.413	Greater than(>)8.413
Running speed	Greater than(>)4.917	4.917-4.77	4.77-4.476	4.476-4.329	Less than (<)4.329
Running Agility	Greater than(>)18.329	18.329-17.796	17.796-16.73	16.73-16.197	Less than (<)16.197
Jumping Ability	Less than (<)1.616	1.616-2.058	2.058-2.942	2.942-3.384	Greater than(>)3.384
Throwing Ability	Less than (<)9.452	9.452-10.926	10.926-13.874	13.874-15.348	Greater than(>)15.348
Flexibility	Less than (<)1.434	1.434-2.517	2.517-4.683	4.683-5.766	Greater than(>) 5.766
Balance	Less than (<)21.599	21.599-27.466	27.466-39.2	39.2-45.067	Greater than(>)45.067

The values listed in table 2 gives a guide to expected scores of Midfielders of Guru Nanak Dev University, Amritsar for the specific Physical Fitness Test Item. In Muscular Strength, the scores below 40.908 are considered very poor, from about 40.908-44.404 is considered poor, 44.404-51.396 is considered average, 51.396- 54.892 is considered good and the scores above 54.892 are considered very good. In Muscular Power, the scores below 41.392 are considered very poor, from about 41.392-43.679 is considered poor, 43.679-48.253 is considered average, 48.253- 50.54 is considered good and the scores above 50.54 are considered very good. In Muscular Endurance, the scores below 3.253 are considered very poor, from about 3.253- 4.543 is considered poor, 4.543-7.123 is considered average, 7.123-8.413 is considered good and the scores above 8.413 are considered very good. In Running Speed, the scores above 4.917 are considered very poor, from about 4.917-4.77 is considered poor, 4.77-4.476 is considered average, 4.476-4.329 is considered good and the scores below 4.329 are considered very good. In Running Agility, the scores

above 18.329 are considered very poor, from about 18.329-17.796 is considered poor, 17.796-16.73 is considered average, 16.73-16.197 is considered good and the scores below 16.197 are considered very good. In Jumping Ability, the scores below 1.616 are considered very poor, from about 1.616-2.058 is considered poor, 2.058-2.942 is considered average, 2.942-3.384 is considered good and the scores above 3.384 are considered very good. In Throwing Ability, the scores below 9.452 are considered very poor, from about 9.452-10.926 is considered poor, 10.926-13.874 is considered average, 13.874-15.348 is considered good and the scores above 15.348 are considered very good. In Flexibility, the scores below 1.434 are considered very poor, from about 1.434-2.517 is considered poor, 2.517-4.683 is considered average, 4.683-5.766 is considered good and the scores above 5.766 are considered very good. In Balance, the scores below 21.599 are considered very poor, from about 21.599- 27.466 is considered poor, 27.466-39.2 is considered average, 39.2-45.067 is considered good and the scores above 45.067 are considered very good.





**Fig 2:** Normal distribution of specific Physical Fitness Test Items (i.e., a. Muscular Strength, b. Muscular Power, c. Muscular Endurance, d. Running Speed, e. Running Agility, f. Jumping Ability, g. Throwing Ability, h. Flexibility & i. Balance) for Midfielders (n3=30) of Guru Nanak Dev University, Amritsar

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