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# **Research Article**

# A STUDY OF MOTOR SKILL TESTS FOR FOOTBALL PLAYERS OF UNDER 14 YEARS AGE GROUP

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#### **ARTICLE INFO**

## ABSTRACT

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Key Words:

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Football is one of the most popular sports in the world, its practice started very early and now being played worldwide. The 'Power and Speed' are needed to stay properly and the body of football players able to learn faster, when performing wise variety of skills. Thus present study is aimed to study the motor skills tests in football players of under 14 years age group. A total of 30 male football players who are under 14 years of age were recruited. Various anthropometric measurements (weight and height) and motor skill tests (30 meter run, kicking the ball, juggling the ball) are taken. The result of present study shows that these players are underweight and posses a very minimal skill, therefore it necessitates the solid understanding of the various factors affecting performance, recovery and health, a knowledge of the nutritional value of food and fluids in addition to the necessary motor skill test and anthropometric parameters can be predictors of under achievement by the present players. The present study concludes that male players of junior national team are having lowest level on kicking and running test items required to play the football.

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# **INTRODUCTION**

Football is one of the most popular sports in the world, its practice started very early and now being played worldwide. Football was formerly known as association football, began initially in 1848. The children, youth and adult people participate with their own level of skills developed (Russel 2011). Football is a game that specifically needs motor skill and speed. In this regard, various professional football schools have been established in recent years to train young players. These schools provide training to increase the motor skills and speed. With the increasing trend of this sport among teenagers and youth across India leads to opening of training schools (Chandrasekaran 2012, Russel 2011).

Football is one of those rare games which demands not only speed but also agility, power, strength and endurance. These traits have extensive role in enhancing the performa of players (Nabhendra Singh, 2010). The game is intermittent in nature and involves multiple motor skills such as running, kicking, dribbling and jumping. Performance depends upon a variety of individual skills and their interaction and integration among different players within the team (Bradely *et al*, 2013; Dellal *et al*, 2011; Rampinmini *et al*, 2018). Many physical tests have been implemented in clubs and academics over the years to evaluate physical performance in football players. This long list

includes linear sprinting, agility, repeated sprint ability,  $VO_2$  max and Yo-Yo intermittent tests. To participate in Football, a player must reach at an adequate level in each of following competent of fitness; speed, agility, quickness, endurance, power, flexibility and strength. (Hoff J. & Helgerud J, 2004; Hoeger *et al* at 2002). The 'Power and Speed' are needed to stay properly and the body of football players able to learn faster, when performing wise variety of skills.

The specific demand of various playing positions requires that one or more of these fitness components which are needed to be developed for successful performance. The researchers were not able to measure spirit speed, but studies have shown that there is a close relationship between jump height and running speed. (Gauffin *et al*, 1989; Wisloff *et al*, 1998). Thus, the football players do need a significant level of basic motor skills like running, jumping and juggling to play the game. Thus present study is aimed to study the motor skills tests in football players of under 14 years age group.

# METHODOLOGY

The present study was conducted at Guru Tegh Bahadur Stadium, Football Coaching Centre, Bahadurgarh, District, and Patiala. A total of 30 male football players were recruited by means of random sampling method. The subjects were

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informed about the procedure of the study and a written informed consent was taken for their volunteer participation before the data collection. The inclusion criteria for selecting the subjects were: 1) only males hockey players 2) players were under 14 years of age. The subjects who were not co-operative and not willing to participate in the study were excluded.

#### Procedure

Various methods used for studying different parameters have been described are the following:

#### Anthropometric Parameters

#### Height

For measuring the height of the subjects anthropometric rod was used. It measure height from floor to vertex of the head. Subjects were asked to stand erect against the wall on an even surface with feet close to each other, hips, back and heels should be touching the wall. Rod was placed in front of the subjects. Horizontal bar of anthropometric rod was slided down till it touches the point vertex of the head and reading was recorded in feet.

#### **Body Weight**

The body weight of the subject was measured in kilograms with the help of a portable weighing machine. The accuracy of the machine was checked before the subject was asked to stand still on the platform, of the machine and the body weight of the subject was recorded.

#### Motor Skill Tests

#### 30 Meter Running

It is used to measure the speed of subject with football. Two lines a starting and a finishing 30 meter apart from each other were marked on the ground with help of a marker. The subject was to start from a standing position from the starting line with Football when whistle blows. The investigation while standing at the finishing line gave two commands "Are you ready"? and 'Go'. At the command 'Go' the subject starts moving with ball as fast as possible to cross the 30 meter finish line with full control over the ball and his body movement direction of dribbling should be straight to the target.

#### Scoring

The time taken to run 30 meter with ball recorded is the score of this test. Two attempts were given to each player and the best perform once with minimum time is scored with the help of prescribed scores of Sports Authority of India.

#### Kicking the ball

It is used to check right number of kicks. The starting point is placed at 11m distance from the pole. The pole was divided in three parts i.e. left, right and centre. The subject was to start from a starting point. The investigator while standing at the pole gave command to subject to start the kicks. The subject was started to kick the ball from starting position up to the pole which is a parted 11m from the starting point.

#### Scoring

The total 10 kicks are allowed to each subject in which four kicks are necessary in left, four in right and two in centre. The number of kicks which goes in right direction. On the basis of

that kicks the scoring is given to subject with help of prescribed scores of Sports Authority of India.

#### Juggling the Ball

It is used to count the number of juggling with football. It was starts in open football ground. The investigation gone two commands to subject "Are you ready"? and "START". At the command "START" the subject starts juggling with football.

#### Scoring

The time is not fixed in it. Two attempts were given to each player and best performance is scored till the ball leaves from their body. The scoring is noted with help of prescribed scores of sports authority of India.

## **RESULTS AND DISCUSSION**

The result of the present endeavor entitled, "A study of football motor skill tests of under 14 year boys" has been described as follows:

**Table 1** Body height (cm), weight (Kg) and BMI (kg/m) offootball players under 14 years of age.

Characteristics	Mean	± Standard Deviation
Height (cm)	143.2	± 2.79
Body Weight (kg)	37.5	$\pm 3.13$
BMI (kg/m <sup>2</sup> )	18.36	$\pm 1.97$

Table 1 shows the mean body height, weight and BMI of football players of 14 years of age as 143.2 cm  $\pm 2.79$ , 37.5 kg  $\pm 3.13$ , and 18.36 kg/m<sup>2</sup>  $\pm 1.97$  respectively. This shows that these football players are underweight and possess low BMI (ICMR 2010).

Table 2 Score	of 30 mete	r running v	with the	ball by	football
players (under	14 years) v	vith help o	f SAI sco	oring st	andards.

SAI score Table for 30 meter running with ball (Seconds)	Scoring	
5.50 and less	3	
5.51 to 5.60	2	
5.61 to 5.70	1	
Present Study	score	
5.64 seconds	1	



Figure 1 Score of football players (under 14 years) in 30 meter running comparing to standard SAI scores.

Table 2 and Figure 1 shows that football players under 14 years of age of the present endeavour took 5.64 seconds to complete 30 meter moving with the ball. While comparing this score with SAI score table. It indicates that these players have one scoring on the score table.



 Table 3 Score of kicking the ball by the football players (under 14 years) with help of SAI scoring standards

Figure 2 Score of kicking the ball by football players (under 14 years) with help of SAI Scoring standards

Table 3 and figure 2 shows that present football players score a mean value of 7.53 kicking the ball that leads to 1 score on the score table which depicts lowest level of Motor Skills.



**Table 4** Score of the juggling the ball by football players with help of SAI scoring standards

Figure 3 Score of the juggling the ball by football players with help of SAI scoring standards

Table 4 and figure 3 shows present football players score a mean value of 29.6 juggling the ball that leads to 3 score on the score table which leads to highest level of Motor Skills and a very good indication.

The results from the present study suggests that subjects training at the Guru Tegh Bahadur Stadium Football Coaching Centre, Bahadurgarh, Dist Patiala posses a minimal level of kicking and running motor skill prescribed by Sports Authority

of India, required to play football. Also, these players do not meet the weight and body mass index requirements needed for the game. The subject exhibit dangerously low body weight that makes to low ranking on growth chart for BMI and all this can lead to serious complications. The reason behind this is their low weight that occurs due to inadequate amount of calories and high energy foods that affects their performance in game.

The health factors linked to being underweight include many side effects for a sports person. Developing osteoporosis i.e. (brittle and weak bones) is very common in underweight children. Also, the immune system becomes weak due to malnutrition affect their body and they were not being able to play properly. We know that, a national health and nutrition examination survey from 2003 to 2006 found that underweight children can't play properly and feel early weak and tired.

Football is an outdoor game in which players of the game walk and after run (on their feet) while playing. As, maintenance of energy level is the key goal players, thus to play properly weight and diet should be maintained Energy balance occurs when total energy intake from food matches energy expenditure from daily activity. Energy is provided by carbohydrates, proteins, fats and fluids in diet. Thus, energy requirement of a player must meet the energy cost of training. Exercise performance can be affected by body weight. Thus, Energy is necessary for maintain body weight and for doing physical activities properly.

As the result of present study shows that these players are underweight and posses a very minimal skill, therefore it necessitates the solid understanding of the various factors affecting performance, recovery and health, a knowledge of the nutritional value of food and fluids in addition to the necessary motor skill test and anthropometric parameters can be predictors of under achievement by the present players.

Thus, we see that these male players underweight which affects their performance. For good performance good diet and proper guide be necessary. So, that they will be improved their performance and balance the energy level in body to play the game.

But the present study concludes that male players of junior national team are having lowest level on kicking and running test items required to play football. However, they are showing highest score level of juggling test item. The scenario is very alarming because these players are supposed to be the future senior team players and they score minimum level of kicking and running score. Thus, with this level of football skill we could not think about higher performance at the international level. So, present study encompasses the importance of motor skill level detection before starting the game at junior level.

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