

# Predictive value of skill performance in terms of physical indicators in 14-year-old football players

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## ABSTRACT

The primary objective of this study was to identify the reality of the physical fitness and skills among young football players in the Najaf Governorate and to find a predictive value for the physical and skills indicators for the selection of junior football players in Najaf Governorate. The researchers used the descriptive approach with two methods of interrelationships. The present study was conducted on the 14 years old players of football schools in Najaf Governorate in the year 2021. The study was conducted in the playgrounds of the football school in the center of Najaf Governorate (Iraq) within the timeframe from January 2021 to March 2021. A total of 40 14-year-old football players participated in the study. Based on the findings of this study, the researchers concluded that the physical fitness of the football players is directly and significantly related to their skill performance.

## KEYWORDS

Performance; Physical indicators; Footballers

## 1. INTRODUCTION

The world has witnessed a wide development in all areas of life, including the field of sports (Samy et al, 2022). Due to its high popularity, football is known as the world's game in many regions of the globe, which led many scientists and researchers to strive to develop this game and to find educational and training means and methods in order to improve the tactical and skill aspect of the

game (Al-Nedawy & Saeed Al-Mousawi, 2022; Zayer, 2022). The process of selecting athletes and directing them towards the appropriate game is the first step that ensures the adequacy of talented athletes in the sports field, including football. Hence, the use of a predictive criterion for physical and skill indicators holds key importance in predicting the outcome of the game.

Therefore, the importance of the research lies in the ways to predict skill performance in terms of some elements of physical fitness for 14-year-old football players. The skill is defined as “a high ability to perform, whether performed individually, within a team, against an opponent, or an apparatus, or without” (Ali & Ali, 1998). The concept of physical fitness is a general and broad concept that is interlinked with the psychological and mental aspects reflected during the highest levels of performance in the game. Physical fitness is one of the components of the general fitness of the individual (Allawi, 1992).

A good physical fitness implies to be free from various organic and functional diseases and that the body's organs perform their functions in a good manner, with the individual's ability to control the body and to face hard work for a long period without excessive stress (Al-Mandalawi & Saeed, 1979).

The selection process in the sports field is one of the most important processes that precede sports training. The sports training should be structured based on the scientifically right foundations and according to the physical characteristics of the players (Abdulhadi & Abdulhamza, 2022; Skalska et al, 2019). To the best of the researchers' knowledge, and expertise in the field of football, the researchers found that most of the trainers rely on their personal experiences for the process of selection of players. Most of them ignore the important aspects of the selection process, which leads to wastage of time, effort and money. As a consequence, the players encounter difficulties in reaching the highest levels of their performance.

The primary objective of this study was to identify the reality of the physical fitness and skills among young football players in the Najaf Governorate and to find a predictive value for the physical and skills indicators for the selection of junior football players in Najaf Governorate. In the present study, the researchers hypothesized that a predictive relationship would be found between physical indicators and basic skills among junior footballers in Najaf Governorate.

## **2. METHODS**

### **2.1. Participants**

In the present study, the research community was represented by the 14 years old football players of the Najaf Governorate. A total of 40 players participated in this study. The study was conducted in the playgrounds of the football school in the center of Najaf Governorate (Iraq) within the timeframe from January 2021 to March 2021.

### **2.2. Instruments and procedures**

In the present study, many tools and devices were used for the purpose of data collection with the aim to achieve the objectives of the research. The various tools used in the present study included an electronic stopwatch, a tape measure, footballs, and a whistle.

In order to achieve the objectives of the study, the researchers conducted physical tests along with the auxiliary work team. The tests conducted were: 30 m running test, jumping stability test, jump on one leg for a distance of 30 meters and 2000 m running test. Various skill tests were also conducted by the researchers and the auxiliary work team, which included: free ball control test for 30 seconds, ball-rolling test, the passing test on a wall for 30 seconds, the test of putting out the ball inside a square of 2×2 m, and the test of hitting the ball with the head in the direction of the semi-circles drawn on the ground.

Various measures were taken while conducting the tests. The auxiliary work team was provided with the information and instructions for conducting the tests and to standardize the methods of their implementation on the research sample. They were also directed to ensure to take all the necessary measures to ensure protection and safety for the testers. The tests were carried out between January 2021 and March 2021, in the football stadium of Najaf Governorate. The results were recorded and documented for processing the statistical analysis at later stage.

### **2.3. Statistical analyses**

The statistical analyses were carried out according to the guidelines of Al-Yasiri & Majeed (2001). The researchers used the Statistical Package for the Social Sciences (SPSS) and calculated arithmetic means, standard deviations, and correlations.

### 3. RESULTS AND DISCUSSION

Table 1 describes the results of the participants in the physical fitness and skill performance tests. As it can be observed in the table, all the sample members had an acceptable skewness for each of the studied variables.

**Table 1.** Results of the participants in the tests

Tests	Unit	Mean	SD	Mode	Skewness
Ball-rolling test	Second	16.21	0.84	15.88	0.4
Free ball control test for 30 seconds	Count	32.1	3.68	32	0.03
Test of putting out the ball inside a square of 2×2 m	Degree	5.75	1.45	6	-0.18
Passing test on a wall for 30 seconds	Count	4.23	1.32	5	-0.59
Test of hitting the ball with the head in the direction of the semi-circles drawn on the ground	Degree	5.62	1.48	6	-0.26
30 m running test	Second	42.3	0.37	45.2	0.87
Jump on one leg for a distance of 30m	m	31.42	3.36	32	-0.18
Jumping stability test	cm	7.48	0.37	7.27	0.57
2000 m running test	Min	16	0.1	15.7	0.30

Table 2 describes the correlation between skill performance and physical fitness in the football players studied. The correlation coefficient was -0.45. The calculated t value was 2.07 and the tabular t value was 0.35, at p=0.05 level of significance. Since the tabular value was less than the calculated t value, hence the correlation was found to be significant.

**Table 2.** Correlation between skill performance and physical fitness in the sample members

Variables	Correlation coefficient	SD	Calculated t value	Tabular t value	Type sig
Correlation between skill performance and physical fitness	-0.45	0.8	2.07	0.35	Sig

#### 4. CONCLUSIONS

Based on the findings of this study, the researchers concluded that the physical fitness of the football players is directly and significantly related to their skill performance. Therefore, it is possible to obtain a quantitative estimate of the skill abilities of football players at the age of 14 years in terms of physical fitness with predictive regression equations. The authors recommend the use of physical fitness tests to select young football players.

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### **AUTHOR CONTRIBUTIONS**

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

### **CONFLICTS OF INTEREST**

The authors declare no conflict of interest.

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