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The Reality of Using Anthropometric Measurements in Selecting Football Players Under the Age of 15: A Field Study of Some Teams in the Tougourt Province.

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Abstract:

The study aimed to assess the current use of anthropometric measurements in the selection of football players under the age of 15. A sample of 20 coaches was randomly selected. A descriptive approach was followed for analysis, utilizing the statistical package SPSS, percentages, and chi-square test. The study concluded that coaches in the Tougourt region do not utilize anthropometric measurements in selecting football players under the age of 15. Additionally, coaches do not adhere to anthropometric measurement criteria in the selection process, indicating a lack of emphasis on anthropometric measurements in the overall player selection process.

Keywords: Anthropometric measurements, selection, football players.

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1. INTRODUCTION

The intersection and tremendous development of various sciences have significantly contributed to advancements in all aspects of life. Given the scientific interest in sports and the pursuit of excellence in the field of athletics, experts and scientists have dedicated their efforts to studying everything related to achieving and enhancing athletic achievements. The fields of biomechanics, measurements, and other sports-related sciences have played a crucial role in determining the performance requirements for any sports skill, encompassing both physical capabilities and body measurements. (Hassanin, 1995.p77)

Choosing the right athlete for a specific sports activity is the first step toward reaching championship levels. Specialists in various sports have focused on defining the necessary and specific specifications for each activity, aiding in the selection of athletes based on specific scientific principles aimed at achieving high athletic levels. Sports morphology stands out as one of the prominent sciences that have opened wide doors and major areas for researching the intricacies of athletic excellence, determining body patterns for each sports practitioner.

An athlete lacking appropriate body measurements for their chosen activity may face biomechanical and physiological challenges, requiring more effort and time to achieve the desired performance compared to an athlete with suitable body measurements. Football, as a sport, requires unique physical and bodily specifications, creating its own charm. Football has the power to turn strangers into friends and friends into brothers. It turns ordinary youth into majestic heroes, and when running with the ball becomes an artistic piece celebrated by poets, one realizes that they are in a beautiful world called the football planet (Jada, 2017.p14).

Football has witnessed significant development in recent years, linking player development to physical, mental, tactical, and psychological aspects. It is a team sport characterized by precision, speed, and excitement. Therefore, enhancing education and training for the skills of this game is only achieved through the use of multiple and effective methods that accommodate players and consider their varying abilities as desired (Osama, 2020.p4)).

Like other sports, football is subject to standards and criteria that players must possess to excel in this type of sport. The selection process is the cornerstone



for achieving high-level athletic success, taking into consideration the diverse features and characteristics of players (Khaled Baushch, 2017.p239-249)

Non-scientific self-selection may waste the exceptional abilities of the game or activity. In contrast, the use of a scientific approach in selecting talents ensures that the best emerging talents reach higher levels. In recent years, scientific attention to talent selection processes has become crucial to nurture talented individuals through scientific programs, aspiring to lead them to the highest athletic levels in the game. This has led to numerous scientific research studies in the field of determining selection criteria, priorities, and the possibility of predicting the level that young talents can achieve in the future based on established standards (AL-Khedary, 2004.p8).

Several studies have recommended the necessity of finding effective solutions regarding how to assess specific preparations (genetic traits) in the early stages of athletic selection processes. This is considering that the growth and development of physical and psychological abilities rely on the existence of these preparations as latent, unapparent capabilities that transform into actual abilities through the influence of the sports preparation system, where both the coach and the effectiveness of the training process play a role (Thaha, 2002.p4).

- In light of the above, the study aims to address the general question:

- What is the reality of using anthropometric measurements in selecting football players under the age of 15 in Tougourt?

1.1.Subsidiary Questions:

- Does the selection process for Tougourt football clubs adhere to anthropometric measurement standards?

- Do coaches have an awareness of all relevant anthropometric measurements that aid in selecting football players?

- Are anthropometric measurements a priority for coaches in the selection of football players?

1.2.Study Hypotheses:

1.2.1.General Hypothesis:

- Coaches of Tougourt clubs do not use anthropometric measurements in selecting football players under the age of 15.

1.2.2.Subsidiary Hypotheses:

- The selection process for Tougourt football clubs does not adhere to anthropometric measurement standards.

- Coaches of Tougourt clubs are not aware of all relevant measurements that assist in selecting football players.



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- Anthropometric measurements are not a priority for coaches in the selection of football players.

1.3. Study Objectives:

- To understand the reality of using anthropometric measurements in selecting football players under the age of 15 in Tougourt.

- To determine whether the selection process for Tougourt football clubs adheres to anthropometric measurement standards.

- To identify whether coaches are aware of all relevant measurements that assist in selecting football players.

- To investigate whether anthropometric measurements are among the priorities for coaches in the selection of football players.

1.4. Study Significance:

The importance of the study is evident in its ability to highlight the reality of the selection process in various Algerian clubs. It aims to understand the stages and steps involved in the selection process, enabling football coaches and specialists to identify the specifications and characteristics of suitable modern football players. The study directs the attention of all those interested in selection processes across different sports specialties to the significance of anthropometric measurements, especially for the youth under 15 years old. The importance of the study lies in opening up numerous research dimensions related to the selection process, particularly in various sports disciplines.

1.5. Study Terminology:

1.5.1 Anthropometric Measurements:

This term originates from Anthropology, a Greek word consisting of two parts - "Anthropos" meaning human, and "Loggia" meaning science. Anthropometric measurements involve the measurement and study of the human body, including weight, height, circumferences, and specific body features. These measurements help determine patterns and indicators for the benefit of establishing appropriate standards according to the requirements of each sport. In this study, the focus is on measurements such as height, weight, and body mass. (Sobhi, 1995.p95).

1.5. 2. Football:

Football is a team sport played by people of all ages, as highlighted by Romi Jameel: "Football, above all, is a team sport that adapts to the entire community" (Jameel, 1986, p.50). It is a collective sport activity where two teams compete to score goals against each other. Each team consists of eleven players and seven substitutes, allowing for three substitutions during a match. Football is a popular game (Saada Diaa, 2017.p17).



1.5.3. Selection:

Selection is the precise choice of players in the preparation phase through testing their physical, functional, psychological, and mental abilities, along with measuring anthropometric characteristics relevant to the specific sports (**Bastwisi, 1999,p435**).

Alawi defines selection as a term used in various life domains, including technological, professional, and medical fields. In the sports context, it is an organized path with the intention of choosing individuals based on morphological and preparatory physical abilities for a specific sports activity. These characteristics are subject to development and reaching higher levels through training (**Alawi, 1995.p93**).

1.5.4. Adolescence Stage:

Adolescence is the third developmental stage in human life, transitioning from childhood to old age. It lies between adolescence and youth and is characterized by rapid growth in physical, mental, and social dimensions (**Tahar Rahmoun, 2022.p368**).

1.5.5. Coach:

The coach is the educational figure responsible for the upbringing and training of players, directly influencing their athletic levels comprehensively and balanced. Therefore, the coach should serve as a role model in all actions and knowledge. The coach is a fundamental and influential figure in the training process, and providing sports teams with the right coach is a major challenge faced by responsible players and club managers (**alayadi, 2022.p26**).

1.6.Previous and Similar Studies:

1.6.1. Study by Gargazi Tarek (2019) titled: "The Reality of Sports Selection for Football Players in the Youth Categories from 13-19 Years: A Field Study of Teams in Biskra Province.". The study aimed to find out the reality of selecting youth groups 13-19 years old. The study used the descriptive approach, and a study tool was the personal interview, a questionnaire form directed to the coaches with a sample of (36) coaches, chosen randomly. To process and analyze the results, the researchers used the percentage and K squared, and they concluded The study indicates that the reality of selection in youth football has nothing to do with scientific foundations.

1.6.2. Study by Nizar, Zouhir, and Mahfoud Haji Jamal (2010) titled: "The Role of the Coach in Scientifically Based Selection in Football for Youth Players.". The study aimed to identify the role of the coach in the selection process based on scientific foundations among junior football players. The study included a sample of (40) trainers, chosen randomly. The study used the



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descriptive approach and a study tool, which was one questionnaire form addressed to physical education teachers in education for coaches. To analyze the results, the study used statistical methods represented by percentage and standard deviation. The study concluded that the coach has a large and effective role in selecting youth football players.

1.6.3. Study by Attai Abdel Hakim (2005) titled: "Phenomena of Discovering Talented Students in Schools for Both Sexes and Ways to Develop the Sports Level in the Arab World (Age 11-12)". The study aimed to discover sports talents in primary and middle schools at an early age, where the researcher used the descriptive approach to A sample consisting of (4172) students of both genders used a physical fitness test battery and adopted analysis, comparison, and statistical methods represented by percentage and arithmetic mean. The study concluded that it is possible to know the phenomena of motor development among gifted people and the possibility of improving them to ensure athletic achievement and good levels.

1.6.4. Study by Naseer Fnoush (2004) titled: "Selection and Sports Guidance for Talented Students within the Framework of School Sports.". The study aimed to highlight the obstacles to the process of selection and sports guidance for gifted students within the framework of school sports. The study used a sample of (580) teachers and teachers of the third stage in the state of Algeria, who were chosen randomly. The study used the descriptive approach and a study tool, which was one questionnaire form directed to physical education teachers in middle school, and an interview tool. To analyze the results, the study used statistical methods, which were percentages and K-squared. The study concluded that the process of selecting and directing sports for gifted students within the framework of school sports suffers from a deficiency. Poor management, lack of capabilities, lack of sports facilities and facilities at the level of educational institutions, and the lack of control of supervisors of the selection process with the scientific rules for selection due to their ignorance of them, and they rely on subjectivity and personal experience.

1.6. 5. Study by Omar Abdullah Abush (2003) titled: "Selection and Sports Guidance for Talented Youth in Football at the Level of Yemeni Clubs". The study used a sample of (120) coaches. The descriptive approach and a study tool, which was the questionnaire, were used. The study also used percentages and K-squared. The study concluded that there is great interest and care in selecting and directing young people to practice football in Yemeni clubs to raise the level of Yemeni football. The lack of scientific criteria for selection and sports guidance is compatible with the Yemeni environment.



2. Methodological Procedures for the Study:

2.1. Study Methodology: Given the nature of the study and after reviewing previous and similar studies, we adopted the descriptive methodology (Talha Hamza, 2022,p38).

2.2 .Study Limits:

2.2.1. Spatial Limits: The study was conducted across several football teams in the Touggourt province.

2.2.2. Temporal Limits: The study took place from 15/03/2023 to 15/05/2023.

2.2.3. Human Limits: The study included a number of youth football coaches in the Touggourt province.

2.3. Study Community: The study community consists of youth football coaches in the Touggourt province, estimated to be 48 coaches for youth football in Touggourt province.

2.4. Study Sample:

The study sample included some youth football coaches from Touggourt teams, numbering 20 coaches, representing 41.66%. They were randomly selected.

2.5. Study Tools:

In this study, we relied on a questionnaire form. This form consisted of 24 statements representing hypotheses of the study. It was distributed to football coaches in the Touggourt province. Table 01 illustrates the distribution of questions in the questionnaire:

Table 1. shows the number and arrangement of questionnaire questions.

Questions	Hypothesis 1	Hypothesis 2	Hypothesis 3	Total
Number	09	08	07	24
Sequence	01 to 09	10 to 17	18 to 24	24

2.5.1. Psychometric Characteristics of the Tool:

2.5.1.1. Validity:

We relied on the validity of experts by distributing arbitration forms to experienced specialists. They were presented with the complete questionnaire, and they expressed their agreement with the questionnaire items, considering them beneficial for the study's hypotheses. Some grammatical errors were corrected, and certain paragraphs were adjusted based on their feedback. The final version of the questionnaire was then produced.



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2.5.1.2 Reliability:

We calculated the reliability coefficient of the tool to collect data using the Cronbach's Alpha equation. The reliability value of the questionnaire was Alpha = 0.707, indicating high stability.

Table 02 represents the Cronbach's Alpha reliability coefficient.

Table 02: Cronbach's Alpha Coefficient

Number of Questionnaire Items	Cronbach's Alpha
24	0.767

Source: The researcher, using the SPSS IBM Statistics version 20 package.

2.6. Statistical Processing Methods:

In our study, we employed various methods using the SPSS version 20, including Cronbach's Alpha, percentages, and Chi-square (χ^2) test.

3. Presentation and Analysis of Results in Light of Study Hypotheses:

3.1. Presentation and Analysis of Results of the First Hypothesis and Discussions:

- The selection by Tougourt football clubs does not adhere to anthropometric measurements.

Table 03 compares the results of the first hypothesis.

Table 03: Comparison of Results of the First Hypothesis

Item Number	Calculated χ^2	Tabulated χ^2	Statistical Significance Level
1	9.9	3.86	Significant
2	6.08	5.89	Significant
3	12	9.84	Significant
4	6.9	5.89	Significant
5	1.59	5.89	Not Significant
6	3.55	5.89	Not Significant
7	9.9	3.86	Significant
8	9.9	3.86	Significant
9	8.97	5.89	Significant
Total	68.61	54.82	Significant

According to Table 03, 85% of the coaches rely on the random Dahiya method in selecting football players in their clubs, 55% rely on observation, and 30% rely on friendly test matches.



The results suggest that the selection process by Tougourt clubs is random, supporting previous studies by Qarqazi Tarek (2019), Fennoush Naseer (2004), and Omar Abdullah Abish (2003), which affirmed the random selection of talents and the lack of adherence to scientific criteria.

It is evident that the majority of coaches do not use anthropometric measurements in the selection process and do not pay significant attention to them.

Therefore, we can conclude that the first hypothesis, stating that the selection by Tougourt clubs does not adhere to anthropometric measurements, is confirmed.

3.1.1. Presentation and Analysis of Results of the Second Hypothesis and Discussions:

- Tougourt club coaches are not aware of all suitable measurements that assist in selecting football players.

Table 04: Comparison of Results of the Second Hypothesis

Item Number	Calculated ka^2	Tabulated ka^2	Statistical Significance Level
10	6.9	5.99	Significant
11	6.7	5.99	Significant
12	6.07	5.99	Significant
13	3.1	5.99	Not Significant
14	6.7	5.99	Significant
15	6.7	5.99	Significant
16	6.7	5.99	Significant
17	9.7	5.99	Significant
Total	59.29	47.92	Significant

Through Table 04, it becomes evident that 65% of the coaches do not believe it is the coach's responsibility to be aware of the characteristics and data of the age group under training, including its anthropometric measurements. Additionally, 55% of the coaches lack information about the essential anthropometric measurements applicable to football players during the selection process.

From the obtained results, it can be concluded that most coaches focus their selection process on the technical and physical aspects, neglecting other aspects. This aligns with the findings of the study by Attai Abdel Hakim (2005), emphasizing that coaches should understand the motor phenomena of the selected age group. Fennoush Naseer's study (2004) also underscores the importance for coaches to be informed about morphological aspects during the selection process.



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Moreover, it is evident that the majority of coaches are not familiar with all anthropometric measurements that could assist them in the selection process. Therefore, the second hypothesis, stating that Tougourt club coaches are not aware of all suitable measurements to assist in selecting football players, is confirmed.

3.1.2. Presentation and Analysis of Results of the Third Hypothesis and Discussions:

-Anthropometric measurements are not a priority for coaches in selecting football players.

Table 05 compares the results of the third hypothesis.

Table 05: Comparison of Results of the Third Hypothesis

Item Number	Calculated ka^2	Tabulated ka^2	Statistical Significance Level
18	9.1	5.99	Significant
19	0.39	5.99	Significant
20	12.8	3.84	Not Significant
21	6.7	5.99	Significant
22	9.8	3.84	Significant
23	16.3	5.99	Significant
24	3.2	3.84	Not Significant
Total	58.29	35.48	Significant

From Table 05, it is evident that 65% of the coaches did not receive sufficient training to control anthropometric measurements. Additionally, 45% of the coaches lack information about the essential anthropometric measurements during the player selection process. They did not receive sufficient training related to the relevant age group, and 90% of the coaches did not undergo continuous training courses in football. This highlights a significant deficiency in the qualification process for coaches regarding anthropometric measurements and age group characteristics.

From the results obtained, it can be concluded that most coaches, in their player selection process, do not prioritize anthropometric measurements. This aligns with the study by Nizar, Zuhair, and Mohand El Haji Jamal (2010), emphasizing the importance of the coach's (teacher's) role and good, deep training in conducting the selection process scientifically and correctly.

Therefore, the third hypothesis, stating that anthropometric measurements are not a priority for coaches in selecting football players, is confirmed.



3.2. Interpretation of Hypotheses:

3.2.1. Interpretation of the First Hypothesis:

Reviewing the results related to the first hypothesis, "Selection by football clubs in Tougourt does not adhere to anthropometric measurement standards." Most coaches conduct the selection process without incorporating anthropometric measurements. They rely on personal observation, experience, or limited knowledge of the game. In all cases, the process does not adhere to scientific foundations based on anthropometric measurements and their conditions (Mohamed ali, 2006.p103).

3.2.2. Interpretation of the Third Hypothesis:

Reviewing the results related to the third hypothesis, "Anthropometric measurements are not a priority for coaches in selecting football players." Most coaches are not interested in anthropometric measurements and do not apply them in practice. This is because they have not received in-depth training that demonstrates the effectiveness of this science. The coaches also lack guidance from specialists in the field, including academic experts in sports management and the responsible authorities for coach training and organizing training courses that benefit coaches in understanding the science of measurements, their benefits, and applications. The coaches' negligence in seeking new information for self-improvement in the selection field is evident.

4. CONCLUSIONS:

Through the presentation, analysis, discussion, and interpretation of the study results, the following conclusions can be drawn:

- 1) The selection process in football clubs in Tougourt does not adhere to anthropometric measurement standards.
- 2) Tougourt football club coaches are not familiar with suitable anthropometric measurements to assist in selecting football players.
- 3) Coaches do not use anthropometric measurements for selecting football players under 15 years of age.

Therefore, all hypotheses of the study have been realized, as coaches in Tougourt clubs do not use and are not interested in anthropometric measurements in the selection process. Consequently, we suggest the following recommendations.



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5. Recommendations:

1. There is a need to pay more attention to the selection process due to its significant importance in developing the level of sports talents and the training supervisors.
2. Incorporate various anthropometric measurements in the selection, especially in football.
3. Organize training courses for coaches on the foundations and methods of applying correct and scientific selection standards.
4. Authorities should provide the necessary resources and equipment for implementing appropriate measurements.
5. Emphasize focusing on anthropometric measurements in the selection process without neglecting the physical, psychological, and social aspects of the player.



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