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Prediction of High Ball Catching of Football Goalkeepers in Terms of Some Biokinematic Variables of Young Players

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ABSTRACT

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In soccer matches, there are many mechanical factors that affect how goalkeepers handle high balls. Everyone knows that the correct posture, the spacing of the feet, and the force used to reach the top of the pitch and catch the balls are all factors that affect how well you can handle high balls.

Accordingly, the main objectives of the research were as follows:

- To find out the relationship between high ball catching of soccer goalkeepers and some biokinetic variables of young players.
- Knowing the percentage of the contribution of some biokinematic variables to the holding of high balls of goalkeepers in football for young players.
- Prediction of goalkeepers' high ball catching with a ball in terms of some biokinematic variables.

The researcher used the descriptive method of survey and the study of correlation relationships to achieve these goals. The research tools consisted of 48 football goalkeepers from Diwaniya governorate clubs, in addition to other data collection methods. After conducting a number of tests to confirm the reliability of the high ball catch test for football goalkeepers, the researcher began to work on the research. Using appropriate statistical methods, he was able to devise a predictive equation that could be used to predict the ability of goalkeepers to pick up the high ball, which in turn would be an indicator of some biokinematic variables. Ultimately, the researcher came to the following conclusion: there is a real and statistically significant relationship between high ball capture and some biokinematic variables.

1. Introduction to the Research:

1-1 Introduction and Importance of the Research:

Sport is just one of many sectors in which modern scientific methodologies have made great progress. The scientific community is beginning to establish itself in its quest to build a more advanced and innovative sports industry, an industry that extensively uses cutting-edge scientific tools and techniques in pursuit of unparalleled athletic success. The movement of athletes between different parts of the body is studied in great depth in biomechanics, one of these disciplines. As a result, goalkeepers and coaches are becoming more capable of Identify and address weaknesses and achieve the highest performance in terms of mobility and technique. As a result, biomechanics is a leading field in the scientific study of motor performance and its underlying mechanisms, including but not limited to physiological, social, environmental, psychological, and training-related aspects. Our goal is to find the best mechanical solutions to motor problems. Modern quantitative and qualitative analysis techniques are rooted in the scientific studies of sports movements, and their overarching goal is to help goalkeepers achieve their full potential by honing their motor skills and gaining a better understanding of the characteristics of athletic performance related to the movement of different body parts. The goalkeeper is an essential part of the football team, and he must be well trained to defend the goal, especially when facing high-bounce balls, as the team's success depends on the goalkeeper scoring the other team's goal. To achieve this, we use a number of vital motor characteristics, such as the player's readiness, the distance between his feet, and the forces used to reach the maximum point, to predict when he will pick up the high ball. Among the duties of goalkeepers are "narrowing the corners on the opponent, leaving the box and its attacking opponent, shortening the distance between him and the defenders, cutting the ball before it reaches the attacker, and organizing the defense during the movement of the ball in play or in fixed situations."(Muwaffaq Asaad: 2010. 48).... Failure to take the right position and place by the goalkeeper in the case of high balls for the opposing team gives them more space and an easier opportunity to score goals, thus making it difficult for the goalkeeper to catch high balls and the opportunity to control them, and then not covering the goal and closing the gaps by the goalkeeper may lead to the opponents' balls entering his goal.

The theoretical importance of this study lies in the development of a knowledge framework for trainers on:

- The Relationship between Holding High Balls for Goalkeepers in Football for Youth Players of Al-Qadisiyyah Governorate Clubs and Some Biokinematic Variables.
- The Percentage of Contribution of Some Biokinematic Variables in Catching High Balls for Goalkeepers in Football for Youth Players of Governor's Clubs Al-Qadisiyyah.
- Prediction of the high ball catching of goalkeepers in football for the youth players of the clubs of the governor of Al-Qadisiyah, in terms of some biokinematic variables

The applied importance of this study is shown through:

- its findings and recommendations, which may help answer some questions about the feasibility of predicting the holding of high balls for goalkeepers with a ball Foot for the youth players of the clubs of Al-Qadisiyyah governorate through some biokinematic variables.
- Setting the appropriate goals and means that contribute to the development of the high ball catch for goalkeepers in football for young club players

Al-Qadisiyyah Governorate.

1-2 Research Problem:

In this study, the researcher will try to answer the following questions:

- What is the relationship between some biokinetic variables and the holding of high balls by goalkeepers in football for the youth players of the clubs of Al-Qadisiyah Governorate?
- What is the contribution of some biokinetic variables to the holding of high balls for goalkeepers in football for the youth players of the clubs of Al-Qadisiyah Governorate?
- Is it possible to predict the high ball catching of goalkeepers in football for the youth players of the clubs of the governor of Al-Qadisiyah, in terms of some biokinematic variables?

1-3-Research Objectives:

1- Knowing the relationship between the holding of high balls by goalkeepers in football and some biokinematic variables, for the youth players of the clubs of Al-Qadisiyah governorate.

2- Knowing the percentage of the contribution of some biokinematic variables in catching high balls of goalkeepers in football for the youth players of the clubs of Al-Qadisiyah governorate.

3- Predicting the holding of high balls by goalkeepers in football for the youth players of the clubs of the governor of Al-Qadisiyah, in terms of some biokinematic variables.

1-4 Research Hypotheses:

1. There is a significant correlation between the high ball catching of goalkeepers in football for the youth players of the Qadisiyyah Governorate Clubs and some biokinematic variables.
2. Some biokinetic variables contribute directly and effectively to the catching of high balls for goalkeepers in football for the youth players of the clubs of Al-Qadisiyah Governorate.

1-5 Research Areas:

1.5.1 Human field: Youth players of Al-Qadisiyah Governorate Clubs.

1-5-2: Temporal Domain: Period from (5/9/2023) to (15/2/2024).

1.5.3 Spatial Field: Football Stadiums of Al-Qadisiyyah Governorate Clubs.

2. Research methodology and field procedures:

2-1 Research Methodology:

The researcher used the descriptive method − the study of relational relationships − to suit the nature of the study and its objectives.

2-2 Tools, Means and Devices Used in the Research:

2.2.1 Research Tools:

The researcher used the following research tools to reach the results and achieve the objectives:

2.2.1.1 Research Community:

The research population was represented by goalkeepers players in youth football and clubs in Al-Qadisiyah governorate, which amounted to (12) clubs, namely (Al-Diwaniya Club, Al-Ittifaq Club, Al-Najma Club, Afak Club, Al-Bdeir Club, Ghammas Club, Al-Hamza Club, Al-Waqzah Club, Al-Shamiya Club, Al-Daghara Club, Al-Mahnawiyah Club, and Al-Sunniyah Club) with a total vocabulary of (48) players. The community was comprehensively counted.

2.2.1.2 Means of data collection:

This research entailed several means of data collection, namely:

1- Note:

The researcher discovered the problem of studying by watching football matches and taking advantage of modern technology (the Internet).

2- Testing and Measurement:

To obtain the necessary data to achieve the objectives of the study, the researcher used the appropriate tests.:

2.2.2 Devices and tools (number), auxiliary:

The researcher relied on a wide range of tools and means to help collect the necessary data.:

- Software & Applications
- Personal computer (Lab Tub)
- Stationery (papers and pens)
- Exam Results Registration Form
- Football field.
- Footballs.
- Signs

3.3 Field Research Procedures:

In addition to the more specialized procedures, the researcher had to adhere to the following basic procedures in order to achieve the study objectives he set to achieve:

3.3.1 Determination of the Tests in Question

The researcher determined the scope of his study by focusing on the two variables of the ability of the goalkeepers of the youth group in the clubs of Al-Qadisiyyah governorate to pick up high balls, in addition to analyzing a number of related biokinematic variables. In order to select the appropriate tool to measure the skill of holding high balls, as well as to analyze the biokinetic aspects using the Dartfish program, the researcher conducted a comprehensive review of the relevant scientific sources and references. This review resulted in the adoption of a specific test concerned with measuring this skill in the goalkeepers. To determine the validity of this test, questionnaires were distributed to a sample of seven experts and specialists in the field, with the aim of surveying their opinions on the suitability of the approved tool.

3.3.1.1 High Ball Catch Test for Goalkeepers in Football: -

High Ball Catch Test**: (Hussain Jabbar: 2020,230)**

- Objective of the test**:**
  Measure the skill ability of the goalkeeper to hold high balls over the head.
- Necessary Tools:
  A regular football half, a keeper in the box, ten balls, a legal goal, an indicator to determine the division of the box, a tape measure, a scoring form, and a whistle.
- Test Specifications:
  The goalkeeper stands in his designated position within the goal area, according to the position of the ball in relation to the goal, and when he hears the coach's signal, he must move quickly towards the designated areas, which have been divided in advance, to intercept the high ball coming from in front of the box or from both sides, as shown in the illustrations. (1, 2, 3).
- Exam Conditions:
  - The Laboratory (Goalkeeper) is given ten balls, four (4) balls from the front, and three (3) balls for each side from outside the box.
  - The exit of the tested guard shall be within the designated test area according to the division of the box.
  - The other goalkeeper enters as a competitive player in these areas to increase the competition between the two testers and the speed of the goalkeeper to catch the high ball from the highest point according to international football law.
  - If the ball does not reach the points specified by the coach, try again.
- Scoring Scores:
  – (3) scores are given when the ball is fully held directly from the top and above the opposing player.
  – Two grades are given when holding the ball in two batches.
  – (1) score is given when the dimensions of the ball are above the opposing player.

– A (zero) is given in the event that the test does not reach the ball or it enters the goal by the opponent.

– The average of the total score of the attempts, i.e. the total score of the ten attempts, is calculated.

$$\frac{\text{Total Attempts Scores (10)}}{10} = \text{Final Grade}$$

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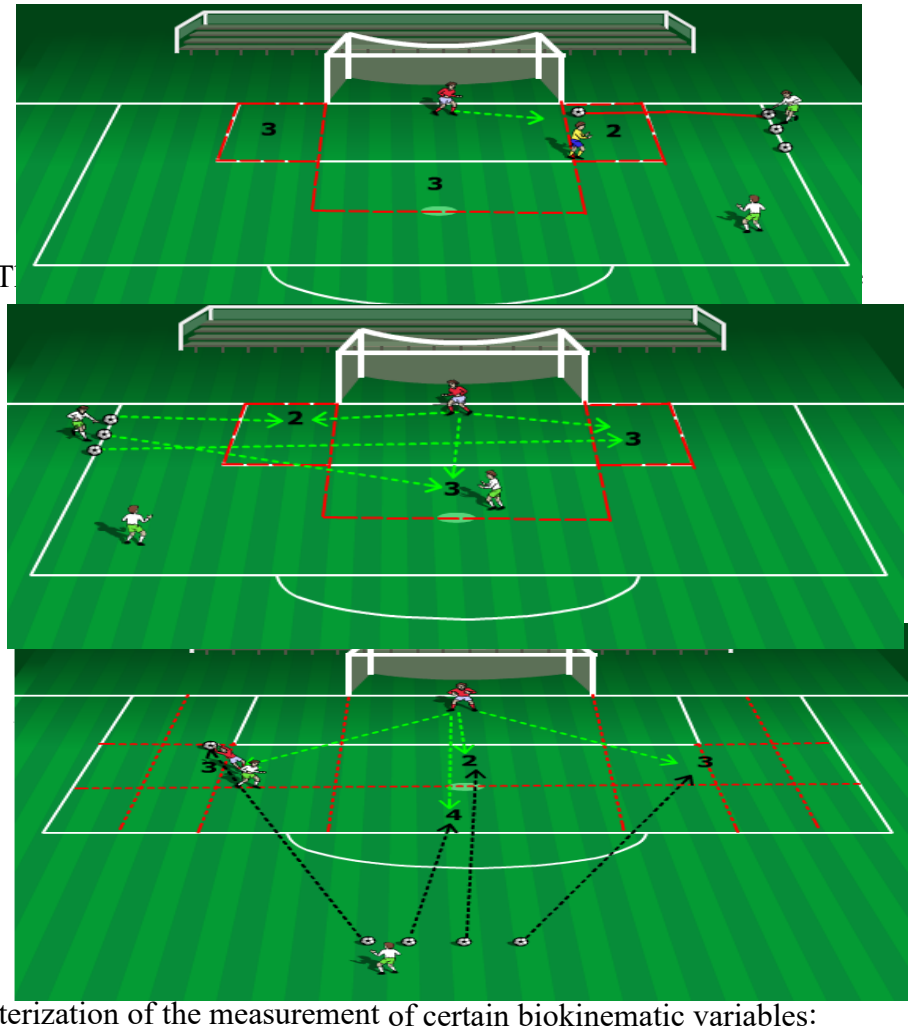

3.2.1.2 Characterization of the measurement of certain biokinematic variables:

In order to take into account the accuracy and objectivity of the test results used in the research, the researcher carefully reviewed the content of many recent scientific references on identifying the most important biokinematic variables that contribute significantly to the performance of goalkeepers according to their biokinematic abilities and not others. , because it is one of the familiar variables and in order to be able to choose the best one in measuring the quality to be measured.

1-The distance between the feet (standby): It is the horizontal distance confined between the inner edge of the feet and is measured by calculating the distance between the heels (in centimeters), which is the preparatory position from which the goalkeeper begins to perform the skill of defending and countering direct free kicks, so the goalkeeper must space the feet with an appropriate opening with the width of the pelvis or chest, where his body is in a relaxed position, and the weight of the body is evenly distributed on the feet, slightly inclined on the toes, and the heels are in contact with the ground . With its lightness and flexion with the knee joint and the torso leaning forward, the head is steady and the gaze towards the ball is focused on its position, which

makes the goalkeeper respond quickly and accurately to the balls aimed at the goal from various places, as well as for the correct standby that helps him to shorten the time period between his perception of the attacker's movement and the direction of the ball aimed at the goal, which increases his chance to distract or keep it away and catch it.

2. The distance between the feet (during the first step): It is the horizontal distance that is taken in the case of the goalkeeper's movement in the first step before performing the grip, and it is from the last touch of the ground for the first foot to the first touch of the ground for the second foot, and it is measured (in centimeters), where the center of mass of the body moves on the left leg and the body is completely anchored on it. Which helps the goalkeeper to prepare to push the ground with maximum force with the left leg and thus get a reaction to reach the maximum speed of the goalkeeper towards the ball aimed at the goal, i.e. it helps him to leave the ground at full speed

3. Knee joint angle (standby): It is the angle confined between the hip line (from the point of the hip joint to the point of the knee joint) and the leg line (from the point of the knee joint to the point of the ankle joint) and is measured only from the inside because it is a closed angle, the muscles working at such an angle are productive Better for strength which makes the goalkeeper ready to push the body in the direction of the ball with maximum force.

4- Hip Angle (Standby): It is the angle between the torso line (from the point of the shoulder joint to the point of the hip joint) and the thigh line (right , left) (from the point of the hip joint to the blister of the knee joint), as this angle can be measured once with the right thigh and once with the left thigh. In the case of (a lateral opening of the legs) and it can be measured from the inside or from the outside, where the installation of the hip joint with a wide range of motion helps and reduces the friction of the joint bones for a strong stability of the joint, and there are ligaments that connect the femur and the pelvis that help increase the stability of the joint, and the hip joint has a large range of movement in different directions and plays an important role in maintaining the balance of the entire human body.

5. Elbow Joint Angle (Grip Moment): It is the angle between the elbow line (from the wrist joint point to the shoulder joint) the moment the goalkeeper jumps to catch the ball, and it is measured by the angle between the line connecting from the shoulder joint point to the elbow joint point on the one hand and the connecting line from the elbow joint point To the point of the wrist joint on the other hand, where the higher the value of the angle, the better the performance and the less time to reach the ball .

6. The height of the center of mass of the body (moment of holding): It is the vertical distance confined from the point of the center of gravity of the goalkeeper the moment the goalkeeper raises to hold the ball to the ground. The center of mass of the body is defined as the point at which the sum of all the forces and moments exerted on the object is equal to zero, which is the balance of the object, it is the point around which the weight of this object is evenly distributed, as the height of the center of gravity of the object helps to reduce the distance.

7- The speed of the path of the center of gravity of the body: - It is the distance traveled to the center of mass divided by the unit of time, as the less time it is, it indicates a high efficiency of the goalkeeper in reaching the ball, and it is measured in units (m/s) that help reduce the time taken to reach the ball, which contributes to holding the ball in the shortest amount of time.

3.3.3 Exploratory Experiment:

Verification of the integrity of the contexts used to conduct the high ball catch test for goalkeepers in football for Al-Qadisiyah Governorate youth clubs, and knowing the availability of their conditions, and the implementation of those conditions is a basic requirement, and its achievement necessitated conducting an exploratory study on (2/10/2023), on a sample of (10) players (goalkeepers) who were randomly selected, from the youth clubs of Al-Qadisiyyah Governorate.

The results that the researcher came out with resulted in the achievement of all the purposes for which the survey experiment was conducted, which indicates the good response of the players (goalkeepers) and their motivation to carry out the test, the appropriateness of the time specified for it, the good output and organization of it, how to conduct it, apply it and record its results, as well as its correctness in measuring Some biokinematic variables and holding high balls for goalkeepers in football for Al-Qadisiyah youth clubs.

3.3.3.1 Scientific parameters of tests used in research:

First: Honesty:

The researcher Siddiq Al-Dhaheri, which is based on the extent to which the test represents the phenomenon it measures (the high ball catch test), through the questionnaire distributed to (7), was extracted from the specialists, who indicated the validity of the test through the following: (The test is valid if it achieves (100%), from the total opinions of experts to agree on the The test's representation of the phenomenon it is measuring).

And after Data collection and unloading used by the researcher (K2) test, The results showed that the test nomination was accepted to achieve it Values greater than (K2) Adult Tabularity (3.84)، At a degree of freedom (1)، and a level of significance (0.05). The table (1) Shows the validity of the test.

Table (1)

Shows the validity of the candidate test

Significance of the difference	Value (K2)		Number of Answers		audition
	Tabularity	Calculated	Don't fix	Fix	
Moral	3.84	7	-	7	Catching high balls

Second: Consistency:

The researcher tried to find the stability coefficient of the test under study (holding high balls), by finding the correlation between its results, and the results of the retest after a period of 7 days.

After calculating the correlation coefficient (Pearson) between the scores of the two tests, it appeared that the correlation was significant, since the value of the T-test calculated for the significance of the correlation was (6).197), which is greater than the tabular value of (2.306), at a degree of freedom (5) and a significance level of (0.05), which indicates that the test under study enjoys a high degree of stability, see Table (2).

Table (2)

Shows the stability coefficient of the tests used in the research, applied to the sample of the exploratory experiment

Statistical significance	Value (v)		Stability Coefficient	audition
	Tabularity	Calculated		
Moral	2.306	6.197	0.86	Catching high balls

3.4 Main Experience:

After completing the implementation of the reconnaissance experiment, and obtaining its results, through which it became clear the validity of the (high ball catch) test, and the safety of the photography procedures for the high ball holding test for goalkeepers in football for Al-Qadisiyah Governorate youth clubs, the researcher conducted their main experiment on (10/10/2024).

3.5. Statistical Methods:

The researcher used the statistical package (SPSS), to process the data and show the results.

4. Results - Presentation, Analysis:

4-1 Devising the Equation for Predicting the Holding of High Balls for Goalkeepers in Football for the Youth Players of Al-Qadisiyyah Governorate Clubs, in terms of some biokinematic variables:

4.1.1 Finding the correlation between some biokinetic variables and the holding of high balls for goalkeepers in football for the youth players of the Qadisiyyah Governorate Clubs:

Table (3)
Shows the correlation coefficients between the research variables

Statistical significance	Value (v)		Nature of the Link	Correlation coefficient	Variables
	Tabularity	Calculated			
Moral	2.011	36.447	It's easy	0.821	Catching high balls for goalkeepers in football – some biokinematic variables

When reviewing the results of the above table, we find that the value of the correlation coefficient between the two research variables (holding high balls for goalkeepers in football for the youth players of the clubs of Al-Qadisiyyah governorates) and some biokinematic variables, reached (0.821).

To verify the significance of the correlation, the T-law was used, and the values of (T), calculated (36.447), which is greater than the tabular value of (2.011), came at a degree of freedom (46), and a significance level of (0.05), which confirms the significance and reality of the correlation between the variables under study, and this provided the researcher with the opportunity to include the independent variable under study within the regression model, to predict the variable through it (Holding high balls for goalkeepers in football for the youth players of Al-Qadisiyah Governorate clubs).

This is confirmed by (Muhammad Sobhi Hassanein, 1983), which states that "the Meaning of Link between] Variables[, that they are Share in Measure a single phenomenon This means that One of them sings About the Other**(Raysan Khraibat: 1989: 309).**

Table (4)
Shows the correlation coefficients between the variables studied and the amount of confidence for them

Percentage of Contribution	The nature of the relationship	Correlation coefficient	Variables
0.674	vehicle	0.821	Catching high balls for goalkeepers in football – some biokinematic variables

4.1.2 Extraction of Quality Indicators of the Linear Regression Equation Model:

Table (5)
Shows the quality indicators of the Linear Regression Equation model

Statistical significance	Value (P)		Average Squares	Degree of Freedom	Total Squares	Contribution Percentage (Interpretation Factor)	Variables	
	Significance Level	Calculated					minion	Independent
Moral	0.000	1219.869	530.640	1	530.640	0.674		

			0.435	48	20.880		Catching high balls for goalkeepers in football	Some biokinematic variables
				49	551.520			

When reviewing the results of the above table, we find that the value of the interpretation coefficient (the percentage of contribution) reached (0.674), and this value indicates that some biokinematic variables contributed (67.4%) to the variable (holding high balls for goalkeepers in football), and it also explains the difference between them - and the researcher believes that this ratio is good and this indicates the quality of the model reconciliation - as for The remaining percentage is (32.6%), due to other variables that were not included in the model.

The same table also indicates that the value of (P), calculated (1219.869), is a function at the significance level of (0.000), which indicates the significance of the multiple linear regression model, and therefore the model represents the relationship between the independent variables and the dependent variable under study.

4.1.3 Extraction of regression equation coefficients:

Table (6)

Shows the values for the regression equation coefficients and the significance of the model parameters

Statistical significance	Value (v)		Relationship		Transactions	
	Significance	Calculated	Amounts	Nature	Value of coefficients	Nature of Laboratories
Moral	0.000	7.518	0.821	vehicle	5.481	Fixed limit (A)
Moral	0.000	3.235			0.045	Fixed limit by 1
Moral	0.000	3.401			0.010	Fixed limit B2
Moral	0.000	5.423			0.052	Fixed limit by 3
Moral	0.000	4.522			0.047	Fixed limit by 4
Moral	0.000	9.887			0.082	Fixed limit by 5
Moral	0.000	3.525			0.025	Fixed limit by 6
Moral	0.000	7.124			0.049	Fixed limit by 7

Table (6) indicates the significance of the slope parameter (A), where the calculated value of (T) for it came by (7.518), which is a function at the significance level of (0.000), and the results of the same table indicate the significance of the intersection coefficient (B1, B2, B3, B4, B5, B6, B7), which was tested with the value of (T), which came by (3.235, 3.401, 5.423, 4.522, 9.887, 3.525, 7.124) respectively, and this value is a function at the significance level of (0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000) respectively. The appearance of the slope parameter (A), as well as the slope parameter (B1, B2, B3, B4, B5, B6, B7), reflects the importance of the variable of some biokinematic variables, and this indicates the quality of estimation. These parameters in the regression model, which make the model highly efficient for the purposes of the prediction process of the studied phenomenon values (holding high balls for goalkeepers in football for Al-Qadisiyyah Governorate youth clubs).

4.1.4 Developing equations for predicting the holding of high balls of goalkeepers in football in terms of some biokinematic variables under study:

From the above, it is possible to develop the predictive equation of (holding high balls), in terms of some biokinematic variables, using the multiple linear regression equation, as follows:

$$Y = A + B1 \times S1 + B2 \times S2 + B3 \times S3 + B4 \times S4 + B5 \times S5 + B6 \times S6 + B7 \times S7$$

Whereas:

(r) Represents the expected value of holding high balls

(a, b) represent linear regression coefficients , which are fixed values

(Q1, Q2, Q3, Q4, Q5, Q6, Q7) represent the independent variable (some biokinematic variables) namely (distance between feet (standby), distance between feet (during the first step), knee angle, hip angle, elbow angle, center of gravity , velocity of body gravity trajectory) respectively.

Thus, the main goal of the (third) research has been partially achieved by developing a predictive equation for (holding high balls for goalkeepers in football), in terms of some biokinetic variables, for the youth players of the clubs of Al-Qadisiyah governorate.

4.1.5. Discussion of the results:

Through the results shown by the tables (3, 4, 5, 6), it is observed that there is a direct relationship between some biokinematic variables and the holding of high balls of goalkeepers in football, where the more some biokinematic variables increase, the more high balls of goalkeepers in football and vice versa, and the researcher explains that (the center of gravity of the body during holding The ball, the distance between the feet at the moment of preparation, the distance between the feet during the first step) appeared in its highest value in the first class, and the researcher attributes this to the nature of the performance of the high ball-holding skill, because the height of the goalkeeper's center of gravity a little before getting up and leaving the ground and the height of the body's center of gravity after tackling the ball was evidence that The motor path of the body occurs with high fluidity and without geometric fractures in the motor path of the goalkeeper's body during the jump, and this led to a quick rise process and in the shortest time." The researcher believes that the ideal kinetic path of the body's center of gravity is determined by maintaining its vertical path, as the higher the height, the higher the The time required for the body's center of gravity to return to its original path and thus the time of its elevation increased, "Developing the explosive ability of the muscles of the legs and thus increasing the pressure in the basefoot and then obtaining the largest possible vertical distance (Eyad Kamel: 89, 2017). The guard has the moment to jump and get up as much as possible, as this reduces the vertical distance between the center of gravity of the body and the ground, and thus will reduce the time needed to get up towards the ball, and this is what we found clear in the change in the center of gravity of the body, which was shown to be a noticeable improvement.

Also, (the distance between the feet at the moment of preparation, andthe distance between the feet during the first step) was the great role of the goalkeeper for the appearance of these variables, and the researcher attributes this to the correct posture and the appropriate distance between the feet during the standby stance, which should be suitable for the situation that makes the goalkeeper with good stability but without high balance, if the distance between the feet is large, we get high balance here, and this makes it difficult for the goalkeeper to move, as it hinders him, i.e. the very close distance.It is also an obstacle where there is an obstacle in equilibrium when we are looking for an appropriate equilibrium , i.e., "the degree of stability depends on the height of the center of gravity, so the stability is greater when this point is in a low position, which increases the moment

of inertia, since the stability of an object is the amount of its own inertia in the face of external forces (**Samir Muslat: 1999, 133)."**

Also, the distance of the first step, we find that the purpose of the small or large distance of the step is "to prepare the body for the next stage, which is to reach the dimensions or hold the ball, i.e. the object becomes ejected **(Sareeh Abed: 2012.56),** where the center of gravity of the object in this stage must be higher than the ground, but in the case of the center of gravity of the object from the ground, it increases the resistance of gravity and thus affects the reaction time as well as the delay in the Lifting and extending the arm completely, and accordingly, the length of the step must be appropriate at that stage, and the goalkeeper must be in a suitable positioning point to ensure that he is close to the ball and repelling it, so the goalkeeper tries to take advantage of thelarger step to reduce the distance of the body with the ball.

5. Conclusions and Recommendations:

5.1 Conclusions:

Through the results, in the light of the objectives and methodology used, within the limits of the research sample, based on the data collected by the researcher, and within the framework of statistical treatments, the following conclusions were reached:

1- Devising a predictive equation through which it is possible to predict (holding high balls for goalkeepers in football), in terms of some biokinematic variables.

2- The contribution rates of some biokinematic variables in catching high balls of goalkeepers in football for the youth players of the governor's clubs of Al-Qadisiyah are large.

3- That (holding high balls for goalkeepers in football for the youth players of Al-Qadisiyah Governorate Clubs) is related to a significant relationship with some biokinematic variables .

4- Some biokinetic variables explain the acceptable percentage of holding high balls for goalkeepers in football for the youth players of the clubs of the governor of Al-Qadisiyah.

5.2 Recommendations:

The researcher recommends the following:

1- Relying on the predictive equations that resulted from this study, and other studies when selecting goalkeepers.

2- Benefiting from the results of this study, especially the predictive equation, by circulating it to goalkeepers of other age groups.

3- Periodic and continuous evaluation of goalkeepers, as well as some biokinematic variables.

Sources:

- Mowaffaq Asaad Mahmoud Al-Hiti: The Integrated Preparation of the Goalkeeper, Damascus, Dar Al-Arab for Studies, Publishing and Translation, 2010.
- Samir Muslat Al-Hashemi: Mathematical Biomechanics, 2nd Edition, Ministry of Higher Education and Scientific Research, University of Baghdad, 1999.
- Sareh Abdel Karim and Wahbi Alwan: Biomechanics of Sports, Al-Ghadeer Company for Printing, Publishing and Distribution, Baghdad, 2012.
- Iyad Kamel Sawadi: The Effect of Ballistic Exercises According to the (Biosyn System) Model on the Development of Muscular Ability, Some Biomechanical Variables, Motor Manifestations and Accuracy of Shooting Skill from High Jumping Handball, Ph.D. Thesis, University of Al-Qadisiyah, 2017.
- Raysan Khraibet Majeed and Thaer Daoud Salman: Methods of Designing Test and Measurement Batteries in Physical Education: (University of Basra, Dar Al-Hekma Press),