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Indicators of the kinetic transfer of some parts of the body and its relationship to the amount of movement of the ball according to the law of collision when scoring in football

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Abstract

The coordination of movement of the parts of the body leads to achieving the goal of the movement, and that the correct assessment of the distance when scoring in football has a major role in the success of the scoring, From the body to the tool (the ball).

Keywords*: kinetic transport, collision law, football*

Introduction

The world has witnessed in the recent period a remarkable development in all fields and various sciences, and among these sciences is the science of sports training, which gives priority to coaches to take care of players according to the use of modern training methods, which has certainly become one of the winning cards owned by coaches if used correctly, especially if training is associated with In other sciences, including (sports biomechanics), the kinetic transport with its various elements is the most important component of all sports and games, including the game of football, and what this game needs to implement skills, especially defensive and offensive skills, which turned out to need the types of movement appropriate to these skills, and these skills include the skill of scoring, Which has a great role in resolving football matches and the importance of research lies in the fact that the skill of scoring is one of the basic skills in the game of football that plays a role Decisive in winning and losing the team, and this skill needs special physical abilities in order to reach the required level.

Research problem

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Football skills differ in their performance and movements, in addition to the movement of the ball and how to deal with it. The executed part The researcher has noticed that there is a lack of coordination between the movement of the body parts and the movement of the ball, especially in the skill of scoring, as the player exerts a very large effort and thus the effort is wasted when executing the scoring, as the ball is weak and ineffective compared to the movement of the player, which raised a question for the researcher, who tried to answer it by Conducting a field research to determine the relationship between the kinetic movement of the body parts and the movement of the ball when executing the scoring.

Research aims:

- Recognize the relationship between the amount of movement of the man and the movement of the ball during scoring.
- Recognize the amount of movement of the trunk and movement of the ball during soccer scoring.

Research hypotheses:

- There is a statistically significant relationship between the movement of the man and the movement of the ball during soccer scoring.
- There is a statistically significant relationship between the movement of the trunk and the movement of the ball during soccer scoring.

Research areas

- The human field:- A sample of the players of the Faculty of Physical Education:-
- The time range is from 11/15/2016 to 1/4/2017.
- Spatial field: - Stadium of the College of Physical Education and Sports Sciences / University of Diyala. 2- Research methodology and field procedures:

2-1 Research Methodology:

The researcher used the descriptive approach in the manner of associative relations through kinetic analysis.

2-2 sample search:

The research sample was determined by the 22 players of the Faculty of Physical Education and Sports Sciences, who were chosen in a deliberate way.

2-3 Means, tools and devices used:

- Camera number 1 type Sony, speed of 11 y/s

1 -One (1) soccer ball.

-One (1) tape measure.

-Balance.

- a program. spss + kinova

- type calculator dell.

1 -log + pens

Whistle.

2-4 Definition the variables:

The search variables for body parts were determined as follows:

- -The stem by the linear momentum of the stem during scoring.
- -The leg by the leg's angular momentum while kicking.
- -Ball - the momentum of the ball at the moment of its launch.

2-5 Scoring test in search:

The researcher used scoring on the goal and from the position of stability and the ball was placed on the arc of the penalty area and two cameras were used to show the first camera. The player - the ball - and the second camera - showing the goal - the player - the first camera was 2-11 m away and its height was 225 cm - the second camera was 235 cm high, and the dimension was 23 m. The sample was brought to the stadium, which numbered (22) players and each player was given five attempts to score on goal.

2-6 Experimental Experiment:

The exploratory experiment - is a preliminary empirical study carried out by the researcher on a small sample before carrying out the research procedures, and it is one of the research methods and tools(Nouri , 2004: p. 89).

Therefore, the researcher conducted a reconnaissance experiment on Wednesday 25-1-2017 on a sample of 5 players representing the team of the Faculty of Physical Education and Sports Sciences, and the purpose of them was:

1 -Knowing the difficulties facing the researcher.

2 -The extent to which the research sample understands the test vocabulary.

3 -Identify the validity of devices and tools.

4 -Knowing the efficiency of the assistant work team.

5- Recognize the time taken to implement the test to take this into account in the main experiment.

2-7 main experience:

The test was conducted according to the place of the team's training, in the football field and the indoor hall at the University of Diyala, College of Physical Education and Sports Sciences, from 20/2/2017 to 15/3/2017.

The test was conducted at specific times and within the team's training units, and the test was conducted in a competitive atmosphere among the players, in order to obtain the best results in the test. A motor transfer test was conducted on the goal and each player was given (5) attempts and the tests were applied according to the team's exercise times.

2-8 Statistical means:

The researcher used the statistical bag SPSS.

3- Presentation and analysis of the results:

3-1 Presentation, analysis and discussion of the results for the research variables:

The researcher used the appropriate statistical means to identify the relationship between the movement of the ball and the momentum of the body, as shown in the following table:

Table (1)

It shows the size of the arithmetic means, standard deviations, correlation coefficient and its function in the research variables

NS	Variables	measruing unit	the middle	deviation	link	Indication level	Function
1	ball movement	kg.m/sec	3.87	0.28	------	------	------
2	man momentum	Tha.m	24,68	3.55	0.32	0.50	insignificant
3	trunk movement	kg.m/sec	111.17	30,07	0.765	0.09	insignificant

3.2 Discussing the results:

Table No. (1) Shows that there is no significant correlation between the movement of the ball and the movement of the striking man, as well as with the movement of the trunk, for several reasons.

- The correlation coefficient was somewhat objective and not significant.
- The correlation between the angular velocity of the man with the amount of translational motion is not significant explaining this because of The different positions that the players took between the distance of the trunk once and its approach again, which called for The players had to take a wider angular range for the man, which negatively affected the consistency and homogeneity of the players' performance in the angular velocity of a man.

What is the performance of the movement of the trunk was somewhat significant within the error that we referred to earlier, and it is known that any mathematical movement is not performed correctly unless all parts of the body participate in its performance, provided that there is coordination and agreement in the movements of the parts of the body and that all work to complete the stages of motor duty What is to be achieved, and parts of the body do not move at the same time or at one speed. The body contains many joints that work to move the body in different directions and in different forms, that is, there is a common kinetic phenomenon that is characterized by the majority of sports movements. (Al-Din Metwally: pg. 251).

And the motor transfer of every sport movement has a specific goal. This goal of movement can only be achieved by operating the large muscles responsible for making the moving force of the joints and parts of the body participating in the motor duty. Therefore, the force must be transmitted smoothly through the sections of the movement in order to obtain a more economical movement. (Theyab Ibn Saad Al-Hamdan: 2009: p. 21).

The kinetic transport index is a scientific term that the human body resorts to to increase the effectiveness, efficiency, strength or speed of the member charged with performance. The kinetic transport is one of the most important characteristics in sports movements (Explicit Abdul-Karim Al-Fadhli-90), and the amount of movement is the product of mass in the speed of the body, which is often in the case Movement or performance assistance by transferring kinetic force from one part of the body to the whole body, for example, the free leg and the arms in the high jump, and the amount of movement may be either transitional or angular(Issam El-Din Metwally: 103).

And the mechanics of movement: It is the sudden change in muscle tension that eliminates the time period between tension and relaxation. The events of this change will disburse added

energy, any excess movement, which caused a distortion in the field of movement, coordination and organization between the two processes of tension and relaxation in muscle contractions, which gives fluidity and that this flow is balance. Between tension and relaxation, dynamism is the experience in motor performance. The balance between tension and relaxation will cause a defect, and this imbalance will lead to confusion of flow (Dhiab Ibn Saad Al-Hamdan: 2009, 156).

As for the field of movement, it is the difference in the amplitude of movement that appears between the sporting events. The motor field represents the shape and direction of movement and the difference in which the skill travels. It draws a motor path in the form of arcs or tools. The presence of any angle in this path means intersection or concordance in the movement.)Muhammad Hamid Sarwan: 1075: p. 31) As for collision, many movements in the sports field are subject to the foundations of collision and rebound, whether it is with the player's body or part of it or with the tools used by the athlete during the performance of the activity in general.

And that the direct and indirect collision occurs during the collision, as the line of action of the collision of the two bodies is perpendicular between them and at their centers of gravity, so the force of the collision between two bodies results in linear motion. It is the case in direct collision, and for this reason the indirect collision is called oblique collision, and this force of the collision results in circular motion (Samir Muslat Al-Hashemi: 1988 p). The original, as in the case of a glass object colliding with another object, is that there are many examples of collision and rebound in the sports field. For example, in basketball, rebound handling is one of the forms of the ball hitting the ground and its rebounding towards the teammate. The force of the collision is the force with which the ball hits the ground. The force that restores The ball returns to its original position, then it is called the force of regression(Samir Muslat Al-Hashemi: 1988: p. 121).

And scoring "is one of the means of individual attack, and scoring requires the player's ability to focus and high technical skill in performance for various types of scoring with the foot (Hanafi Mahmoud Mukhtar:: p. 29). Zuhair al-Khashab defines it as "the actual and serious attempt by the attacking player to enter the ball into the opponent's goal, taking advantage of his psychological, physical, technical, tactical and mental capabilities within the framework of international football law."(Zuhair al-Khashab: 1988: p. 151).

Conclusion

The coordination of movement of the parts of the body leads to achieving the goal of the movement, and that the correct assessment of the distance when scoring in football has a major role in the success of the scoring, From the body to the tool (the ball).

References

1. Essam El-Din Metwally Abdullah, Kinesiology and Biomechanics between Theory and Practice, Dar Al-Wafaa for Printing and Publishing, El-Mostah University.)1988).
2. Hanafi Mahmoud Mokhtar, Junior Football, Dar Al-Fikr Al-Arabi Press, Cairo, Bt.
3. Hanafi Mahmoud Mukhtar, The Scientific Foundations in Football Training, Dar Al-Fikr Al-Arabi, Cairo, 1977.
4. Ibrahim Salama, physical fitness, tests and training, Nabea Al-Fikr, Cairo, B-T.
5. Kurt Meinel, Kinetic Learning, translated by Abd Ali Nassif, Dar Al-Kutub Institution for Printing and Publishing, Mosul University 1980.
6. Muayyad Al-Badri, Football Law and the Global Referee Index, Dar Al-Fatina for Printing and Publishing (1992).
7. Muhammad Hamid Sarwan, The Reality of Football, Lebanon, Dar Al-Shorouk, 1975.
8. Muhammad SobhiHassanein, Measurement and Evaluation in Sports Physical Education, Volume 2, 3rd Edition, Arab Thought, Cairo) 1995).
9. Nouri Ibrahim Al-Shawwak and Rafea Saleh Al-Kubaisi, Research Guide for Writing Research in Physical Education, Al-Baraka Advertising, Publicity and Advertising, Baghdad 2004.
10. Qasim Hassan Al-Mandalawi and Mahmoud Abdullah Al-Shati, Sports Training and Records, Directorate of Dar Al-Kutub for Printing and Publishing at the University of Mosul, Mosul 1987.
11. Samir Muslat Al-Hashemi, Biomechanics, Dar Al-Hikma for Printing and Publishing, 1988.
12. Sareeh Abdul-Karim Al-Fadhli, Biomechanics Applications in Sports Training and Motor Performance, Dar Dijla Amman -) Jordan).
13. Theyab Ibn Saad Al Hamdan Al-Ghamdi, The Reality of Football, Emirates, Dar Al-Afaqi.2009.
14. Zuhair Al-Khashab and others, Football, Dar Al-Kutub for Printing and Publishing, Mosul, 1988.