The effect of kinetic prediction on some mental and physical abilities of handball goalkeepers

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Research Summary

The study aimed to identify the relationship between motor expectation and some mental abilities of the goalkeeper as well as to identify the relationship between motor expectation and some physical attributes of the goalkeeper as well as to identify the relationship between motor expectation and some mental abilities and physical attributes of the goalkeeper.

The researcher hypothesized that there is a significant correlation between motor expectation and some mental abilities. As for the research areas they are

-Human field: - Goalkeepers of the Premier League clubs (elite).

-Time domain: - For the period from 3/2/2019 to 5/5/2019.

-Spatial field: - Sports halls

In the third chapter, the researcher dealt with the methodology and procedures of the field. The researcher used the descriptive approach in the method of correlative relations. The research included selecting the research sample in a random manner and included (12) goalkeepers representing the Premier League clubs (elite) the second group as well as the means of collecting information and the steps of carrying out the research. And preparing tests for the study. Conducting experimental experiments and using statistical methods.

The results are presented, analyzed and discussed in Chapter 4 after statistical methods and laws have been made to facilitate their handling. The fifth section included the conclusions reached by the researcher and showed that the test of the motor predictive computer is able to measure the motor expectation of the goalkeeper handball, although it tends to measure mental abilities by a large percentage as well as a correlation between the motor expectation of the goalkeeper with physical characteristics as well as the prediction link Motor with mental abilities except cognitive-motor As for the relationship between motor expectation and physical and mental qualities, a correlation has emerged between it and the variables (intelligence - response speed - perception - kinesthetic). Significant correlation for the variables (motor speed - motor response) either relationship with mental abilities has appeared with variable (attention)

The researcher concluded with the recommendations of the research, which is the adoption of the test for predictive motor to measure the level of motor expectation of the goalkeeper as well as the development of mental capabilities of the goalkeeper as well as the use of computer technology in tests and exercises to obtain accurate results.

Methodology:

The researcher has used the descriptive approach in the method of correlative relations to suit the research problem (it represents a scientific diagnosis of problems or phenomena as far as objective tools are available and then this diagnosis is expressed in linguistic and mathematical symbols set according to a well-organized organization). Society and Sample Research:

The researcher identified the research community and they are the goalkeepers of the Premier League clubs (elite) and the number (26) goalkeepers divided into two groups (the first and second) The researcher has chosen a sample of his research random way they are goalkeepers The second group of clubs (Najaf, Karbala, Kufa, Police, Karkh and Peshmerga) numbered 12 guards after the exclusion of goalkeepers Kut club for not performing tests and thus the percentage of the sample reached 46%. The tests were conducted in the halls and stadiums of the clubs where the exercises are taking place except for the clubs north and Baghdad have been tests in the hall (Asaad Shukr) in the province of Najaf during their participation in the elite league has been the homogeneity of the sample members in terms of variables studied Implementation of field tests:

Field tests were conducted as follows:

-Group I: They are clubs (Karbala - Najaf - Kufa) for a period of three days as the tests were conducted to ensure that the player is not tired when performing tests as follows:

-First day :

The tests (concentration of attention - perception - motor - response speed) were conducted on Wednesday 6 / 2 / 2019 = 10 am in the club halls above.

-the second day :

The tests (kinetic speed of the arms - flexibility - intelligence) were conducted on Thursday

7/2/2019 10 am in the halls of the clubs above .

-the third day :

Tests (Kinetic prediction - kinetic speed of the two men) were conducted on Friday, at 10 am in the halls of the clubs above. The second group:

The tests were conducted for the second group representing the clubs (Karkh - Peshmerga - Police) in the hall (Asaad Shukur) in the province of Najaf during the competitions of the elite league for three days are as follows:

-First day:Tests (Concentration of Attention - Sensory Perception - Motion Response Speed) were conducted at (Asaad Shukr) hall -the second day :

The tests (kinetic speed of the arms - flexibility - intelligence) were conducted at (Asaad Shukr) hall -the third day :

The tests (Kinetic prediction - kinetic speed of the two men) were conducted at (Asaad Shukr) hall -the fourth day :

The theoretical test for motor predictions was performed.

Research variable

Focus attention

Kinesthetic perception

Response speed

Kinetic speed of the arms

Flexibility

Intelligence

Kinetic prediction Kinetic speed of the two men

Theoretical test of motor prediction

The test was designed by the researcher and after it was exposed to some experts and specialists, the design was conducted according to the following steps Steps to Perform Kinetic Prediction Test:

This study required to identify the values of motor prediction of the members of the research sample for the difficulty of obtaining special devices for this type of measurement. The researcher considered the use of computer by designing a special program to measure the motor predictor of the goalkeeper. First Stage: (Expert Opinion): In order to finalize the test for the motor predictors of the goalkeepers to suit the research, the researcher will present the test to a group of experts and specialists in the field of motor learning and game tests, in order to determine the ability of the test to measure the characteristic to be measured.

Second stage: (Explanation of the tests):

-A group of players who shoot the penalty will be photographed by placing the camera behind the goal and another in front of the goal in a way that ensures the clarity of the goal and without a goalkeeper.

Field Test for Kinetic Prediction :

Test: Measuring the field forecast for the goalkeepers.

Mental tests:

-Cognition test - kinesthetic

Table (5)

The table showing the arithmetic mean, standard deviations and correlation coefficient for theoretical motor predictions and intelligence

| S | Variables | Arithmetic mean | standard deviation | Correlation coefficient | Significance |
|---|--------------------|--------------------|--------------------|-------------------------|--------------|
| 1 | Kinetic prediction | 17.5 | 1.67 | 0.72 | moral |
| 2 | Intelligence | 82.91 | 5.33 | | |

*The total value is (0.57) under the degree of freedom (10) and the level of significance 0.05

Table (5) shows the arithmetic mean of the computer predictive test for the individuals of the research sample. Kinetic prediction of computer and intelligence (0.72), which is greater than the value of the table (0.57) below the level of significance (0.05) and this shows a significant correlation between the two variables.

| | Table (6) | | | | | | | | |
|---|---------------------------------|------------|-----------|-------------|--------------|--|--|--|--|
| S | Variables | Arithmetic | standard | Correlation | Significance | | | | |
| | | mean | deviation | coefficient | | | | | |
| 1 | Theoretical motor prediction | 17.5 | 1.67 | 0.79 | Moral | | | | |

| 2 | Focused attention | 10.25 | 1.05 | |
|---|-------------------|-------|------|--|
| | | | | |

*The total value is (0.57) under the degree of freedom (10) and a level of significance 0.05

Table (6) shows the arithmetic mean of the computer predictive test for the individuals of the research sample. Between the computer expectation and the concentration of attention (0.79), which is greater than the table value of (0.57) below the level of significance (0.05) this shows a significant correlation between the two variables.

Table (7)

Shows arithmetic media, standard deviations and correlation coefficient for theoretical kinetic prediction and kinesthetic perception

| | | prouton una | | The second secon | |
|---|------------------------------|--------------------|-----------------------|--|--------------|
| S | Variables | Arithmetic mean | standard deviation | Correlation coefficient | Significance |
| 1 | Theoretical motor prediction | 17.5 | 1.67 | -0.28 | Random |
| 2 | Perceptual - kinesthetic | 79 | 10.20 | | |

*The total value is (0.57) under the degree of freedom (10) and a level of significance 0.05

Table (7) shows the arithmetic mean of the computer kinetic prediction test for the individuals of the research sample. The simple correlation between kinetic prediction and computer perception - kinetics (-0.28) is greater than the table value (0.57) below the significance level (0.05).

4.1.2 Present the results of the simple association between theoretical motor expectation and physical

characteristics.

Table (8)

Table showing arithmetic media, standard deviations and correlation coefficient for

theoretical motor prediction and arms velocity

| S | Variables | Arithmetic mean | standard deviation | Correlation coefficient | Significance |
|---|---------------------------------|--------------------|-----------------------|-------------------------|--------------|
| 1 | Theoretical motor prediction | 17.5 | 1.67 | 0.89 | Moral |
| 2 | Kinetic speed of the arms | 34.25 | 2.13 | | |

*The total value is (0.57) under the degree of freedom (10) and a level of significance 0.05

Table (8) shows the arithmetic mean of the theoretical motor prediction test for the individuals of the research sample. The simple between the theoretical motor expectation and the motor speed of the arms (0.89), which is

greater than the value of the table (0.57) below the level of significance (0.05) This shows a significant correlation between the two variables.

Table (9)

Shows the arithmetic media, standard deviations and correlation coefficient for the theoretical motor predictions and kinetic speed of the two men

| S | Variables | Arithmetic mean | standard deviation | Correlation coefficient | Significance |
|---|------------------------------|--------------------|-----------------------|-------------------------|--------------|
| 1 | Kinetic prediction | 17.5 | 1.67 | 0.73 | Moral |
| 2 | Kinetic speed of the two men | 10.58 | 0.99 | | |

*The total value is (0.57) under the degree of freedom (10) and the level of significance 0.05

Table (9) shows the arithmetic mean of the computer predictive test for the individuals of the research sample. The simple between the computer expectation and the motor speed of the two men (0.73), which is greater than the table value of (0.57) below the level of significance (0.05) This shows a significant correlation between the two variables.

Table (10)

Table showing arithmetic mean, standard deviations and correlation coefficient for

| | theorem | cal motor prear | cuons and kine | de response | |
|---|--------------------|-----------------|----------------|-------------|--------------|
| S | Variables | Arithmetic | standard | Correlation | Significance |
| | | mean | deviation | coefficient | |
| | | | | | |
| - | ···· | 1.7.7 | 4 | | |
| 1 | Kinetic prediction | 17.5 | 1.67 | -0.90 | Moral |
| | | | | | |
| 2 | Kinetic response | 1.95 | 0,0054 | | |
| | 1 | | | | |
| | | | | | |

theoretical motor predictions and kinetic response

*Tabular value (0.57) below the degree of freedom (10) and a level of significance 0.05

Table (10) shows the arithmetic mean of the computer predictive test for the individuals of the research sample, where it was (17.5) either standard deviation was (1.67) either the mean of the test of motor response was (1.95) and standard deviation of power (0.0054) The value of the simple correlation coefficient Between the computer expectation and the motor response (0.88), which is greater than the value of the table (0.57) below the level of significance (0.05) This shows a significant correlation between the two variables Table (11)

Table (11)

A table showing the arithmetic media, standard deviations and correlation coefficient for theoretical kinetic prediction and kinetic elasticity

| S | Variables | Arithmetic | standard | Correlation | Significance |
|---|---------------------|------------|-----------|-------------|--------------|
| | | mean | deviation | coefficient | |
| | | | | | |
| 1 | Kinetic prediction | 17.5 | 1.67 | 0.88 | Moral |
| 2 | Kinetic flexibility | 24.83 | 6.58 | | |

*The total value is (0.57) under the degree of freedom (10) and the level of significance 0.05.

Table (11) shows the arithmetic mean of the computer kinetic prediction test for the individuals of the research sample. Between the computer expectation and the motor elasticity (0.88), which is greater than the value of the tabular value of (0.57) below the level of significance (0.05) this shows a significant correlation between the two variables.

4.1.3Presentation of the results of multiple correlation of field kinetic prediction and physical characteristics Table (12)

| Table12 shows the multiple correlation coefficient between field motor prediction and physical characteristics | | | | | | |
|--|-------------------------|-----------------------|----------------|-------------------------|-----------------------|--------------|
| Statistical parameters variables | Correlation coefficient | Ratio Contribution | Value (F) * | Degree of freedom | Significance level | Significance |
| Field kinetic prediction + kinetic speed of the arms | 0.67 | 0.40 | 8.51 | 1 10 | 0.001 | Moral |

Table (12) shows the value of the correlation coefficient between field forecast and physical characteristics. Adult (4.96) under two degrees of freedom (1, 10)

4.1.4 Presentation of multiple correlation results for field motor predictions and mental abilities Table (13)

| | | Ta | ble(13) | | | | | |
|---|---|-----------------------|----------------|----------------------|-----------------------|--------------|--|--|
| Shows the | Shows the correlation coefficient between field motor prediction and mental abilities | | | | | | | |
| | | Statistica | l parame | eters | | | | |
| Statistical parameters variables | Correlation coefficient | Ratio Contribution | Value (F) * | Degree of freedom | Significance level | Significance | | |
| Field motor prediction + intelligence | 0.82 | 0.65 | 21.87 | 1 10 | 0.001 | Moral | | |

Table (13) shows the value of the correlation coefficient between the field and the physical attributes. Adult (4.96) under two degrees of freedom (1, 10)

4.1.5 Presentation of the results of multiple correlation of theoretical motor prediction and physical characteristics

| Table (14)s | shows the corre | elation coefficie | nt betwe | en theoretica | al motor pred | liction and | | | |
|---|--------------------------|-----------------------|----------------|-------------------|------------------------|--------------|--|--|--|
| | physical characteristics | | | | | | | | |
| Statistical parameters variables | Correlation coefficient | Ratio Contribution | Value (F) * | Degree of freedom | Significanc e level | Significance | | | |
| Theoretical motor prediction + kinetic speed of the arms | 0.90 | 0.79 | 43.80 | 1 10 | 0.001 | Moral | | | |
| Theoretical motor prediction + kinetic speed of arms + | 0.96 | 0.90 | 12.97 | 2 | 0.001 | Moral | | | |
| response speed | | | | 9 | | | | | |

Table (14) shows the value of the correlation coefficient between the theoretical motor prediction and physical characteristics, where the value of the correlation coefficient between the theoretical motor prediction and the motor speed of the arms (0.90) and a contribution rate (0.79) has been calculated (F) calculated (43.80), which is greater than the value Table (4.96) under two degrees of freedom (1, 10).

The value of the correlation coefficient for the relationship between theoretical motor prediction, kinetic speed and response speed was (0.96) with a contribution rate (0.90). The calculated value (F) was (12.97) which is greater than its tabular value of (8.02) and under the degrees of freedom (2, 9).

4.1.6Presentation of the results of multiple correlation of theoretical motor predictions and mental abilities Table (15)

| Table15 Shows the correlation coefficient between theoretical motor predictions and mental abilities | | | | | | | |
|--|-------------------------|-----------------------|----------------|-------------------------|-----------------------|--------------|--|
| Statistical parameters variables | Correlation coefficient | Ratio Contribution | Value (F) * | Degree of freedom | Significance level | Significance | |
| Theoretical motor prediction + attention concentration | 0.79 | 0.59 | 17.22 | 1 10 | 0.002 | Moral | |

Table (15) shows the value of the correlation coefficient between the theoretical motor predictions and mental abilities. (4.96) under two degrees of freedom (1, 10).

4.1.7 Present the results of the multiple association of theoretical motor predictions, physical characteristics and mental abilities table 16

| Table 16 Shows the correlation coefficient between theoretical motor expectation and physical characteristics and mental abilities | | | | | | | | | | |
|--|-------------------------|-----------------------|----------------|-------------------|---------------------------|--------------|--|--|--|--|
| Statistical parameters variables | Correlation coefficient | Ratio Contribution | Value (F) * | Degree of freedom | Significa nce level | Significance | | | | |
| Theoretical motor prediction + response speed | 0.90 | 0.79 | 43.80 | 1 | 0.001 | Moral | | | | |
| Theoretical motor prediction + response speed + intelligence | 0.97 | 0.93 | 21.07 | 2 | 0.001 | moral | | | | |

| Theoretical motor prediction + response speed + intelligence | 0.98 | 0.95 | 5.41 | 3 | 0.04 | Moral |
|---|------|------|------|---|------|-------|
| +Cognitive motor sense | | | | 8 | | |

Table (16) shows the value of the correlation coefficient between the theoretical motor predictions with physical characteristics and mental abilities. The correlation coefficient between the theoretical motor predictions and the response speed (0.90) and the contribution rate (0.79). The value of the calculated (F) was (43.80) which is the largest Of the tabular value of 4.96 under two degrees of freedom (1, 10).

The correlation between theoretical motor predictions, response speed and intelligence was (0.97) with a contribution rate (0.93) and the calculated value (F) was (21.7), which is greater than its tabular value of (8.02) and under the degrees of freedom (2, 9).

The correlation coefficient between theoretical motor prediction, response speed, intelligence and kinesthetic perception was (0.98) with a contribution rate (0.95.).) Discuss the results

Discuss the theoretical motor expectation with intelligence

Table (5) shows the existence of a correlation between theoretical motor expectation and intelligence. The researcher attributes the reason that intelligence is the ability of the individual to solve the problems facing the individual with different styles and methods. This is a set of problems to be solved and overcome in order to achieve the desired goal of addressing the ball, therefore, intelligence plays an important role in addition to expectation in the decision-making process appropriate The correct motor expectation that can precede the appearance of the exciting and thus achieve success in repelling the ball by detecting the movement of the player or any position taken by the performing player when performing the throw, and this is what happened to the goalkeepers when performing the test as the smart goalkeeper is the one who analyzes the player's position more than movement The arm and the ball at the moment of the correction in an attempt to predict the location of the ball correctly. In the view of (Janan Said Rahou 2005) ⁽¹⁾ that adaptation requires the human to create new solutions feasible to overcome difficulties or to avoid them, relying on his previous experience is not enough to provide him to allow to face new situations, so his intelligence is the first to work and seeks to find material and intellectual means Useful. Discuss theoretical motor prediction and attention

Table (6) shows that there is a correlation between theoretical motor expectation and attention. This is because attention is a mental process that helps the player to focus his consciousness towards certain stimuli and to address them that a good goalkeeper wants to expect the player's movement and the ball to identify all the stimuli and effects of that work In other words, the player must focus his attention to more than one touch at a time, whether it is for the player Or the ball with isolating all the variables or external influences and confining the focus of attention in the main influences, which enables him to receive information well, interpreted and analyzed, as well as monitoring the ball and the player before the implementation and the moment of implementation in order to make the right decision and thus reflected positively on the expectation process and this is what emerged from The results confirmed that the

guard who has the ability to concentrate is a high chance of successful forecasting. This refers (Abu Ela Ahmed 1997)⁽¹⁾ that the field of view of the player must contain a lot of variables that determine the size of attention and in this case it should focus on a lot of influences such as (follow the ball, follow the opponent, and the circumstances surrounding the game) and the focus in Attention to those stimuli is one time and then at the moment of responding to a particular stimulus depending on the positions of the opponent. As Mohammed Hassan Allawi et al. (2002)⁽²⁾ believes that one of the foundations of possessing athletic competence and sports achievement is the ability to focus attention, distribute and transfer strongly under various circumstances surrounding the movement. And in it in terms of small time distances.

4.2.3Discuss the theoretical motor prediction with the motor speed of the arms and legs

Tables (8) and (9) show that there is a correlation between the theoretical motor prediction and the motor speed of the arms and legs. The researcher attributes this relationship between the two variables because the goal keeper when performing the test on the computer depends mainly on the process of motor prediction on Mental abilities ie the central nervous system has a major role in the process of motor prediction, especially as

the motor prediction is a process A mindset that involves the process of receiving and interpreting information in the brain and then giving instructions to the working muscles in order to achieve the desired goal, since speed in general and motor speed in particular physiologically depends on the central nervous system, through the transmission of rapid and repeated neurological instructions to the working muscles as well as Coordination between the excitement and desist processes of these muscles, which means that the nervous system has a major role in the processes of motor prediction, and since the speed in general and the motor speed in particular physiologically depends on the central nervous system through the transmission of Aazat This means that the nervous system has a major role in the motor prediction processes as well as kinetic speed. Nervousness in the process of sending quick nerve instructions to the working muscles In this regard refers (Abu Ela Ahmed 1993)⁽¹⁾ The types of motor and transitional speed are physiologically related to the central nervous system, which has to perform its important function through rapid and frequent exchanges of excitation and desirability of nerve cells, as well as careful selection and continuous regulation of the work of motor units. On the other hand, motor speed is related to muscular work, which is the result of the implementation of the directives of the central nervous system. Discussion of theoretical motor prediction with motor response speed

Table (10) shows that there is an inverse significant correlation between theoretical motor prediction and the kinetic response speed, ie the less the response time the more the motor predicted speed The researcher attributes this to the fact that the kinetic prediction shown by the goalkeeper during the test is the result of several stages of mental processes, namely the stage of receiving information and then analyzed and interpreted and the choice of the motor program Appropriate for this, then send nerve stimuli to the working parts, which showed that there is a great mental capacity of the goalkeeper performed during the test. On the other hand, the speed of motor response as confirmed by many sources as a complex process of physical and mental capabilities as an individual to respond at high speed

This time depends on the ability of the central nervous system to receive and interpret information, and then to make appropriate decisions. Then the musculature performs motor duties. Theoretical expectation, which is the role of the neuromuscular system in performance, stresses (Atheer Abdullah Al-Lami 2005) ⁽¹⁾ that the motor response time is the time between the excitement and the appropriate response in the shortest possible time, depending on the speed of nerve stimuli and the ability of the musculature to develop Vith kinetic Moreover, when performing the reaction velocity test, which includes the presence of signals from the test determinant (right, left), the goalkeepers perform some kind of kinetic prediction of the moment before the signal appears. Thus, an increase

in the speed of motor response, and if the opposite will modify the motor program to match the target to be achieved and thus the speed of response will decrease. In this regard (Abu El-Ela Ahmed, 1997) ⁽¹⁾ asserts that the reaction based on the motor prediction is an important factor in the speed of performance, especially activities that require a rapid reaction. Kemal Darwish et al. (1998) ⁽²⁾ assert that the success of the goalkeeper's performance depends on the correct motor response at the moment when the stimulus (or ball) appears immediately after, and delayed perception of the stimulus increases the reaction time and thus affects the response speed, The correct response helps him repel and control the balls. Discuss theoretical motor predictions and flexibility

Table (11) shows that there is a correlation between the theoretical motor expectation and flexibility. This means that the goalkeeper who has the ability to successfully predict the motor has a high elasticity as well, so the researcher believes that the reason for that relationship is that the good guard is the one who has qualifications and specifications High mental and physical aiming so that he can defend the goal in different cases of correction and that any defect that occurs in one of these abilities (mental and physical) affects the other as the characteristic of the flexibility of mobility is one of the important qualities that the goalkeeper must have in order to address all balls Different angles preferred A for his ability to change the positions of his body quickly He emphasizes (as Darwish et al. 1998) ⁽¹⁾ the importance of flexibility of the goalkeeper when he repels the balls pointed to the various angles that require access to the goalkeeper by doing movements that require a suitable range in addition to the flexibility of the goalkeeper that helps him and enable him to change direct directions When the viewer makes a deception during the correction



Figure (8) explain the correlation between field kinetic prediction and the kinetic speed for arms Discuss the field motor predictions with physical qualities

Table (12) shows that there is a correlation between the field motor forecast and the motor speed of the arms as shown in Figure (8). Especially that most of them prefer to stand at different distances from the goal line (1.5) (2.5) etc. In order to narrow the angle.

Shooting and distracting the attention of the target player as well as forcing the player to make one choice for the correction In this regard (Kamal Darwish et al. 1998)⁽¹⁾ that the goalkeepers prefer to stand in the middle of the goal either the goal line at a distance of about 2 to 3 m to narrow the angle of correction in front The player is distracting, and the moment of resurrection corrects the ball in different defensive positions. Therefore, we note that the goalkeepers and when they leave the line the chance of aiming at the level of the line up higher than in the bottom of the correction because of the narrow angle of the correction and this means that the goalkeeper uses his arms a large percentage when performing the throw 7 meters. If the aim is lowered, the movement of the two legs is a very short distance compared to the movement of the arms, which means that it necessarily causes the goalkeeper to use all parts of his body during the performance of the 7-meter throw (Kemal Darwish et al., 2002). Blocking operations

according to the direction of the ball The guard may use part or involve more than part during the defense, resulting in more defensive space and in the high - balls preferably use the arms together when the ball over the goalkeeper and the reach of the arms.



Figure (9) the correlation between the kinetic expectation and intelligence

2.7.7Discussion of field motor predictions with mental abilities

Table (13) shows that there is a correlation between the field of kinetic expectation and intelligence only among the mental abilities as shown in Figure (9) .The researcher believes that the reason for this is that intelligence is a comprehensive

mental ability of other mental abilities, that is, the guard who has the ability of intelligence It is the focus of attention to more than one exciting at the same time in order to detect the movements of the opponent during the performance of any skill on the pitch at any moment of correction and thus be the use of mental ability added to the capacity of intelligence This is why there is a high correlation between field prediction and intelligence and a high contribution rate, especially since the goalkeeper during the Tadeh. there are a set of features that must make quick decisions in order to take appropriate defensive position and movement of the attacking player so must be intelligent field towards the opponent and during Defense There is a reading of the player's thoughts through the lightness of the player as well as the arm aimed as well as for the attacker player who reads ideas ⁾¹⁽ Kamal Darwish: 1998 op. Cite Goalkeeper This is confirmed by (Kamal Darwish et al. 1998) ⁽¹⁾ that the penalty throw in handball is a special type, it is a game of a special kind, it is a match between the thought of the striker's aim of the penalty shootout, which aims to achieve a goal in the goalkeeper and goalkeeper thought Which is designed to repel the ball to prevent it from entering.



Figure (10)demonstrates the relationship between theoretical motor prediction and physical characteristics

Discuss theoretical motor expectation and physical characteristics.

Table (14) shows that there is a correlation between theoretical motor predictions and the attributes of the motor speed of the arms and the speed of response as shown in Figure (10) and the researcher believes that the reason for this is that there is a common factor between the three variables is the central nervous system, which has a role Significant in the three variables and this has been referred to earlier as the theoretical expectation (computer) depends to a large degree on what was made the appropriate decision as well as the focus of attention of the corrected player As for the speed of response, the role of the nervous system appears clearly and significantly as the speed of response means the time period The incident Abyan The emergence of news and testing the appropriate motor program down to the beginning of the movement and this in itself depends on the work of the nervous system and its effectiveness in the speed of receiving information and making the right decisions according to stored motor programs As for the motor speed of the arms it is physiologically linked to the central nervous system through the ability of the device to send nerve signals And fighting for the muscles or parts to be moved in a coordinated and coordinated and through the above note that the cause of the link was indirect ()1(Kamal Darwish)





Discuss theoretical motor expectation with mental abilities

Table (15) shows that there is a correlation between theoretical motor expectation and attention as shown in Figure (11). Accuracy and speed in detecting the movement of the player and sending information through the sense organs to the central nervous system in order to choose the appropriate motor behavior and this is one of the main factors for correct motor expectation When the performance of the throw (7) meters and confirms

(Kamal Darwish 2002) (1) that the penalty throw is an independent match between the player and the goal keeper and here psychological aspects such as courage and self-confidence, etc. in addition to the ability to focus attention along with experience and motor speed and reaction speed Expectations that play a key role in the goalkeeper's success in repelling the ball. Discuss the theoretical expectation with physical qualities and mental $abilities1()^{(1)}$ (Kamal Darwish ,2002)

From the table (16) shows the emergence of correlations between the theoretical expectation on the one hand and ((speed of response, intelligence, cognition motor sense)) The researcher believes that the theoretical motor predictive test tends to measure mental aspects more physical aspects through its association with intelligence and sensory perception Kinetic, two mental abilities that depend on the efficiency of the work of the central nervous system as well as physical character (speed of response to a vehicle) is a compound characteristic depends on the work of the nervous and musculature mainly. Conclusions and recommendations **Conclusions:**

In the light of the results of the research and statistical analysis of the data obtained through the tests, the researcher reached the following conclusions :

1- There was a significant correlation between the theoretical motor expectation on the one hand and the mental abilities (intelligence and concentration of attention) on the other hand .

2- There was a significant correlation between the theoretical motor predictions and physical characteristics (kinetic speed of the two legs, kinetic elasticity and kinetic speed of the arms _____.)The kinetic response was a significant inverse relationship, ie, the less response time increases the level of motor predictions.

3- There is a significant statistical correlation for the field motor expectation and physical attributes (kinetic speed of the arms) where the contribution rate of this variable (0.40%), in achieving the motor prediction, while the results showed a significant correlation relationship with the field motor and mental abilities. Intelligence) where the contribution of this variable (0.65%).

4- The results of the multiple correlation of the theoretical motor predictions and physical attributes appeared, respectively (the kinetic speed of the arms) where the contribution rate of this variable (0.79) and in addition to the variable speed of response where the contribution rate (0.90) The results of multiple correlation of the theoretical motor expectation and mental abilities was Just to focus attention where the contribution rate of this variable (0.59)

5- The results of multiple correlation of theoretical motor predictions and (physical attributes and mental abilities) appeared, where the contribution rate was respectively the response speed and reached (0.79) and by adding the variable of intelligence became (0.93) and then the variable of perceptual kinetics to the ratio of contribution

(0.95)

6- The most important abilities that have achieved high contribution rates in achieving motor expectation for mental abilities (concentration of attention and intelligence), while the physical attributes are (motor speed of the arms and response speed.

7- Emphasis on performance that there is a compatibility between (physical abilities and mental abilities), especially the concentration of attention and intelligence with the motor speed of the arms and speed of response and according to the researcher's findings.

Recommendations:

In the light of the study carried out by the researcher and the results of the field procedures have been developed some of the recommendations that the researcher hopes to use as much as possible in order to reach high levels of defense skill in the Iraqi country are as follows:

.1The need to focus on the application of scientific principles and principles of motor expectation during the training units in line with the requirements of motor performance. 2. Emphasis must be placed on training that achieves the correct application of the variables under study in line with the compatibility between the abilities used (physical and mental) with the most proportions in achieving high levels of motor prediction first and then with the lowest impact.

.3The best position of the standby should be to achieve an exaggerated tide compared to other defense methods where negative bending occurs opposite to the movement in the preparatory section to overcome the inertia of the arms and legs inertia and thus reach the places of motor prediction faster.

.4Adoption of the test of the motor prediction to measure the level of prediction of the goalkeeper.

.5Use computer technology in tests and exercises to get accurate results. Conducting similar studies in mental abilities and other physical tests not addressed by the study.

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