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Synchronization between the movement of the player and the ball and its relationship to some bio kinematic variables and the accuracy of scoring from the moving ball for the deaf and dumb category in football

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Abstract--The importance of research is evident in highlighting an important segment of society, which suffers from losing hearing and speech, and thus the measurement of a synchronization between the movement of the player and the moving football when performing the scoring and what this synchronization generates from the bio kinematic variables and that understanding this situation is born with specialists in this field, they are deeper to the real mediations Which these players can reach and thus work according to these data, which means working in the appropriate way in these samples, which contributes in one way or another to upgrade their sports levels. The study intended to identify the relationship to coincide between the movement of the player and the ball with the values of some bio kinematic variables and the accuracy of scoring from the balls The animation of the deaf and dumb category with football. It concluded that the synchronization of the two evaluation has to do with the bio kinematic variables that were studied except for the knee angle variable of the pivot leg and the trunk angle variable at the moment Passing the mid -circle area and time evaluation of synchronization.

Keywords---synchronization, player, bio kinematic variables, scoring, dumb category, football.

Introduction

Definition of Research

Introduction Research and importance

The bio kinematic science has contributions to this, as in its beginnings, a science that contributes to the application of information about designing a place, work environment, tools and functional requirements to improve production and safety and reduce the psychological effort on the worker (Sawsan Abdel Moneim & others: 1977), the destination changed and expanded to contribute to the re-activity of the injured people. The result of the First World War, meaning that it contributes to the development of the movement among the general public and the restoration and rehabilitation of the movement among the disabled in particular, but its entry into the field of sport led to achieving very high levels and many international numbers were destroyed and in many sports activities, including football that the mechanics had a fingerprint. It is clear in the use of mechanical foundations as important factors in applying the skills as in the impact of Magnus and Newton's laws in the movement and that the scoring skill, which is the most important skills that culminate in the end of the attacks for the team and the team's effort is the first interest of specialists in the field of biometric and coaches alike as this skill requires High physical and motor abilities, especially when they lead to movement and through the balls sent from the colleague that requires a high amount. From timing and approaching a good coincidence in order to achieve a high degree of mastery skill, which appears in the form of bio kinematic variables that achieve the best accuracy if you achieve good harmony in terms of variables, and this matter is important not only for healthy players, but even with the disabled players who suffer, which is deaf and dumb, and they practice football naturally, but they do not practice it with their healthy peers. Despite their disability, they achieve the high levels of achievements, and this is what the Iraq team for the deaf and dumb of football reached, as it achieved second place in Asian.

And if the studies that deal with such a category and enter into the details of the disability and the problems it cause affecting performance in a certain way and this is confirmed by (Magda El -Sayed Obaid :2000), the hearing disabled usually suffer from a disorder in the motor synergy. To control its limbs and coordinate between them quickly and easily. And that this disorder leads to the extent of the errors in the biotic variables that can cause performance failure. It must be studied in order to direct education and training properly to avoid these mistakes, as understanding the relationship of synchronization between the movement of the player and the ball and the extent of its impact on the biotic variables and accuracy leads to improved Performing the training and education process, especially for such a category of disability. From the foregoing, the importance of research is evident in highlighting an important segment of society, which suffers from hearing loss and speech, and thus the measurement of a synchronization between the movement of the player and the moving football when performing the

scoring and what this synchronization generates from bio kinematic changes, and that understanding this situation is born with specialists in this field, a deepest understanding For the real mediations that these players can reach and thus work according to these data, which means working in the appropriate way in these samples, which contributes in one way or another to upgrade their sports levels.

Aim of the study & Objective of the Study

Learn about the relationship to coincide between the movement of the player and the ball with the values of some bio kinematic variables and the accuracy of scoring From the moving balls of the deaf and dumb category.

Research Approach and field procedures

The researchers used the descriptive approach in the survey style, and the research sample included (8) players from the national team for the year 2021-2022 and in preparation for the (International Olympics for the Deaf 24) championship that will be held in the Brazilian city Very severe (91 decibels and more) (Jamal Muhammad Al -Khatib: 1998), as they reached (32 %) for the research community, and homogeneity was conducted for members of the sample with the following variables (length, bloc, age) that may affect the results of the main experience, and the researchers used laboratories The difference that whenever it is less than 30%, the sample is homogeneous (Wadih Yassin Al-Tikriti & Hassan Muhammad :1999), as it was found that the value of the arithmetic medium and the standard deviation of the total length of the body amounted And the standard deviation of the mass (72.37-4.40) kg and with a difference of difference (6.08%), as well as the arithmetic medium and the standard deviation of age (25.5-5.52) and with a difference of difference (21.68%) and they are homogeneous in these variables, as the theme of the difference factor was less than 30%as T M use from another sample identical to the main sample specifications for the construction of the test (20) distributed (10) players among the national team and the same as the players of the Maysan Governorate team. The researchers used Arab and foreign sources and references and the Sony HDR-XR520 videos with speed (100) Photo /second and Dell Inspire (Cor i7) and a triple -footed carrier. The player's standing site and a height of (1.5 m) measured from the center of the lens to the surface of the earth. A test . was applied by researchers that combine synchronization and accuracy. Scientific transactions have been made for this test and obtained a laboratory of sincerity for synchronization (0.57) and for accuracy (3.64) And steadfastness for synchronization (0.93) and for accuracy (0.81) and objectivity was because the method of measurement is clear and it is digital values as (the tastes of (Obyidan & others: 1998) indicate that the clarity of instructions in terms of testing the test and giving the degree, that is, gives the same results, whatever different Corrected, in order to obtain the values of the bio kinematic variables, the researchers used the(Dart-fish) Team Pro 5.5. The speed of the approaching speed was measured by calculating the distance of the steps for the body divided on the transition time and the body's inclination angle variable in the first contact with the ripped man with the Earth through the corner confined between the connection line from The mid -foot point to the middle point of the body with the

horizontal line and the knee angle variable of the pulp man the moment the ball was kick And the variable of the angle speed of the leg retaliatory for the ball, as the ratio between the angular change of the leg is the most likely to it and until the moment of contact with the ball divided by time and a variable through the calculation of the angle confined between the stem line from the middle point of the body with the horizontal line to the middle of the upper body and the variable of the leg angle of the man hit, the moment he kicked the ball through the angle between the leg and the thigh at the last moment of contact with the ball, and before the moment of breaking the ball, measured from the back and the speed of the start of the ball that is Q by calculating the distance between the ball center point after leaving the ball, presented the player to another point to the ball center after its launch by (6) pictures and divided into the time of that distance (speed = distance /time) and the variable of the starting angle of the ball, which is the angle confined between the horizontal level and the connection line From the center of the body from the first image to the other point of the ball center after (6) pictures and measured from the front.

User Test

Synchronization & accuracy of scoring: In order to test the sample members, a test was designed for the synchronization and accuracy of the scoring, and the approval of the experts was obtained on the testing validity of the test after making some amendments.

The goal of the test

Measuring the synchronization between the movement of the player and the ball and the accuracy of the scoring

Tools used

footballs, a specific area for receiving the ball, a tool for passing the ball.

Test method

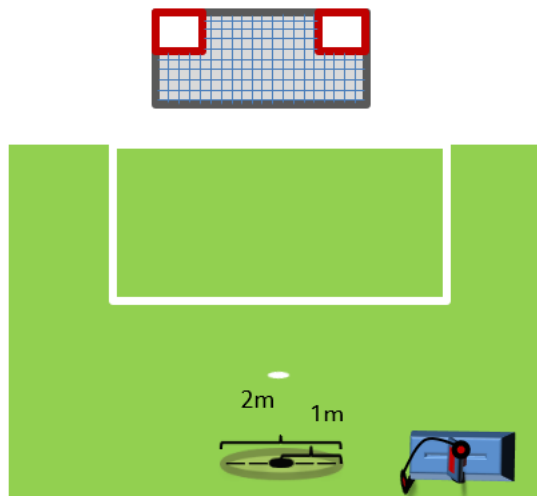
The player stands outside the penalty area and behind the area specified for kicking the ball and the player begins to start to kick the ball after starting from the tool towards the specified area. Test specifications The division of the two regions shall be on both sides of the center point, where the division is according to the balls of the ball kicking (1, 2, 3), and the distance of each region (40 cm) was shown in form (1) and each player is given 5 attempts in each side. To measure the accuracy, the two tops of the goal were divided into two areas measuring each of them (1 m2), so that the ball is kicking towards these two areas for the goal, and each player is given 5 attempts for each side.

Registration

For synchronization, the player takes the degree in which the ball is kicks, which is (1, 2, 3) and the area of each region (40 cm) and the registration is in two ways

First: the evaluation of the points and it is as follows : Three degrees when kicking the ball in the center of the circle and two degrees when kicking the ball in the middle of the circle and one degree when kicking the ball in the area between the middle and end of the circle, and the player gets the highest evaluation, which is (30) degrees for the player and the ball to coincide.

Second: Time evaluation according to the division of the balls of the ball. The evaluation is one right to the center of the circle, and its time evaluation (0.66 seconds - 0.80 seconds) and the evaluation second is the right of the center of the circle, and its time evaluation is (0.81 seconds - 0.92 seconds) .The third evaluation is the center of the circle, and its time evaluation is (0.93 seconds - 1.06 seconds) and the fourth evaluation is the left of the circle center, and its time evaluation is (1.07 seconds - 1.19 seconds) The fifth evaluation is the left center of the circle, and its time evaluation is (1.20 seconds - 1.49 seconds) The accuracy is calculated as follows: The player takes the degree through scoring in one of the two regions two degrees when the ball enters one degree one degree when the square of the square touches zero other than that and the player gets the highest evaluation, which is (20) degrees for the accuracy of the scoring.



The SPSS (SPSS) version was used 22 for data processing, the mathematical medium, the standard deviation, and Pearson's correlation laboratories were extracted.

Results

After the data was processed, the results were reached as in the following table

Table (3)

shows the values of the calculations and standard deviations of the values of some bio kinematic variables, synchronization and accuracy of scoring for angle upper left of football goal for the deaf and dumb category

Descriptive			
Variables	Arithmetic mean	Std. Deviation	N
speed of approaching	3.2543	.45905	40
angle of the body's tendency at first contact leg pivot earth	112.6400	5.48475	40
knee angle of pivot leg	127.8150	4.74220	40
Angle speed of stare leg	270.2375	29.46440	40
angle of the trunk tendency moment kicks the ball	98.8450	4.96196	40
Angle hitting leg ride moment the ball kicked	140.3375	6.31176	40
Ball starting speed	18.7488	1.16778	40
angle start ball	17.4925	1.38849	40
synchronization	Digital evaluation	.74032	40
	Time evaluation	.14314	40
accuracy	.8250	.78078	40

Table (4)

The values of Person's connection coefficient shows the synchronization and accuracy of scoring and the values of some bio kinematic variables when performing the skill of scoring football from the movement to the upper angle left for the deaf and dumb category

Variables		speed of approaching	angle of the body's tendency	knee angle of pivot leg	Angle speed of stare leg	angle of the trunk tendency moment kicks the ball	Angle hitting leg ride moment the ball kicked	Ball starting speed	angle start ball	accuracy
synchronization Value	Pearson Correlation	.779**	.075	.143	.393*	.218	.401*	.378*	.588**	.327*
	Sig. (2-tailed)	.000	.648	.378	.012	.177	.010	.016	.000	.039
	N	40	40	40	40	40	40	40	40	40
synchronization Time	Pearson Correlation	.759**	.111-	.274-	-.343*	-.301	.410*	.411**	.655**	.479**
	Sig. (2-tailed)	.000	.495	.087	.030	.061	.009	.009	.000	.002
	N	40	40	40	40	40	40	40	40	40

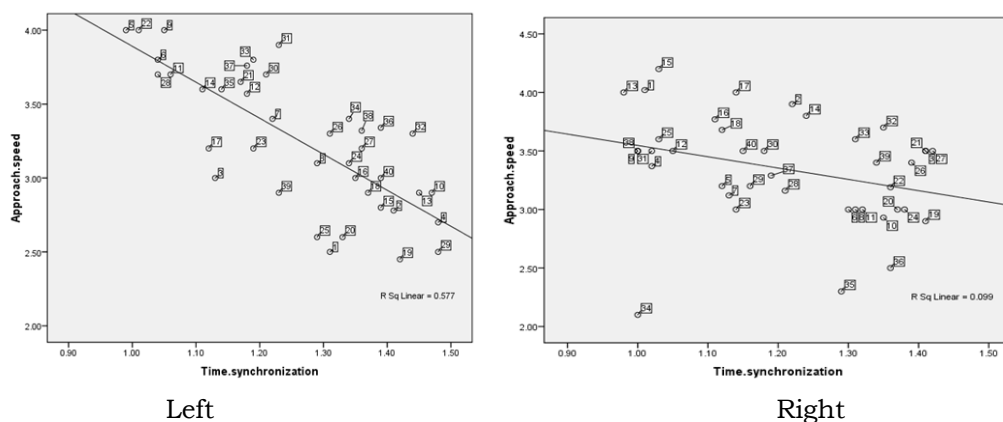
In order to ensure the assumption of the research related to the connotation of the link, the researchers used the Person's association and based on the results, a relationship between the synchronization and the speed of approaching has

emerged as a direct relationship and both sides of the right and the left and in both cases of evaluation for synchronization and as a result of the foregoing, it becomes clear to us between the speed of the player's approach and the speed of the ball where he is determined The speed of approaching according to the speed of the ball and the specific distance that the ball must travel and then kick, according to the rationale that is translated by the player through the ball from speed, distance and direction, and from it the time of arrival is formed and through which what is required is to be set in order to reach the meeting point between The ball is presented, so if the speed of the ball is slow, then the player reduces his speed in order to reach the ball in a specific place, in proportion to the speed with the distance and time. The relationship between speed, distance and time (Samir Musalat : 2010) can be formulated: $SPEED = DISTANCE / TIME$.

And since the kick of the ball is in the high path, in this case the player will try to reduce his speed in order to increase the angle of kicking the ball, which in turn leads to the direction of the ball for the high path designated for scoring and (Samir Musalat :2010) indicates whenever the angle between The two powers were small, the result was large and vice versa, and this is what happened from the speed reduction in order to adjust the performance requirements associated with each other and this is related to the accuracy in the performance that in return is inversely proportional to the speed and from observing the results it also turns out that the speed of starting movement and setting the ball speed with the player's speed That is determined by time and the start of the movement is an important factor in finding the appropriate synchronization to kick the ball in the best region in order to achieve a better accuracy and kinematic variables that are suitable for the nature of performance. Figure (1) shows the speed of approaching and its relationship to the synchronization of both sides

Figure (1)

the relationship between the synchronization (time evaluation) and the speed of approaching the right and left side



The data between the synchronization and the corner speed of the man, and for both sides, the existence of a direct link to the right and the left, and in both cases of evaluation of synchronization, and the researchers believe that the emergence of this relationship is due to the fact that the leg righteous movement

is in the scoring of the movement weighted from the knee joint, as the late leg is It is usually the leg who kicks the ball, as its angle speed and the angle distance it travels in the background is dependent on the right time timing with the ball and may decrease and that distance increases accordingly and that is one of the angle speed components, as the angle speed equation is the angular transition / Time (Gerd Houghmouth :1978), which affects the speed of the ball in the final outcome, and that weighted is compatible with the speed of the moving ball. The speed of the leg movement requires a good timing with the ball, which is usually provided by the correct awareness of the distance between the player's movement and the start of the handling and its speed, meaning that the visual future and free nervous compatibility In order to play a major role in controlling the player's movement, especially when the player reaches the required scoring zone, in which the feet of the pivots are appropriate to kick the ball, and this indicates something, but it indicates the consensus between the time of two movements for two independent body, who meet in a specific place and time (Khaled Abdel - Mawgoud & others: 2020). Likewise, the time for moving the foot to the ball is an important factor, as reaching the right area for a good time, provides a better opportunity to achieve an angle speed without hurrying to kick the ball, that is, that the time is taken to perform an appropriate speed, because "the force that affects a period of time is released It has a mechanical term for payment, "The payment is the strength rate X at the time of its influence (Hussein Mardan Omar & Iyad Abdel Rahman :2018) and that the leg movement depends heavily on the strength that the muscles provide and that any muscle contraction requires time to create that contraction and according to the requirements The appropriate strength, so the amount of strength caused by the muscle relates to the speed of the muscle shortening length when stimulating in the least time after the muscle is received by the stimulant (Susan Hill : 2014) .

The results also show that the relationship between the synchronization and the angle of the righteous leg knee is the moment he kicked the ball in the right side, as well as between the synchronization and the angle of the righteous man's knee at the time of kicking the ball to the left. The lengthening of the half of the country as much as possible and in proportion to the angle of the knee of the man's knee and near the foot, and after the foot -based of the ball is an important factor that the correct synchronization provides with the movement of the ball and reaching the appropriate point in which the ball is supposed to kick and that any delay or the movement early may mean moving the ball in an appropriate manner That is, when the ball is kicking, which is in the first half of the circle and that the athlete's expectation during approaching and his movement towards the center means that kicking and the ball takes place away from the anchor feet and thus the corner of the man varies and that the presence of the correct and required synchronization and the player's movement in the way he appreciates from the speed of the ball and his speed towards it is very important In achieving a basic requirement, which is the speed of the ball that must be suitable for its capabilities and also achieve accuracy and remember a previous study in volleyball (Hasan Hamza Fadiil & Ya'arub Daikh Baqi : 2021) Parts of a second was important in achieving better results for the blocking process, which is also a movement that requires a coincidence between that body movement. It is worth noting that the process of collision and apostasy between two moving bodies is usually the most difficult types of apostasy due to what the control and timing

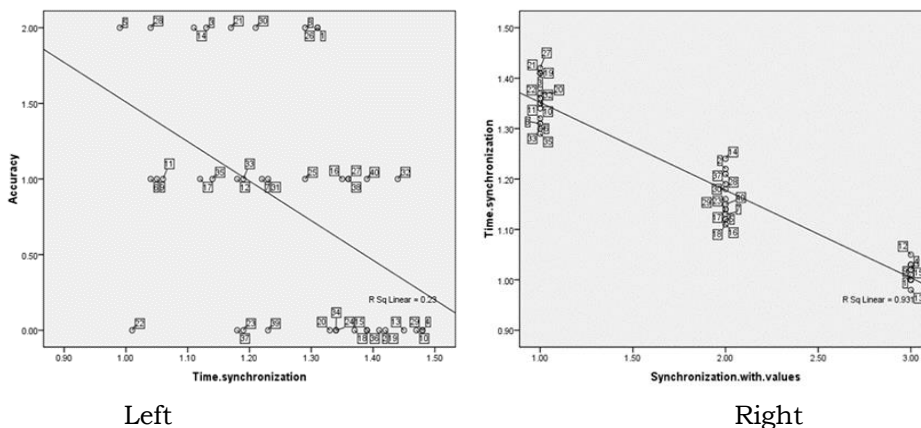
element is imposed between the two bodies and remember (Sawsan Abdel Moneim & others 1977), citing (Jensh & Shultz) that there are three types of apostasy, which is the bounce of a moving body from a fixed surface And a fixed body from a moving surface and a moving body from a moving surface and that the first type is the easiest species and is essential in understanding the other two types, so we find that this matter is difficult even for the best players, so we see a failure to score from such cases, which raises surprise, but this situation is very difficult requires The timing and coincidence between the two bodies at the beginning of the movement, as well as after reaching the ball, coinciding between the ball and the retreat, so it becomes more difficult, and this is what we see in that some cases and despite its proximity to the goal, but the scoring fails or the ball goes to the goalkeeper due to the difficulty of achieving a high or lower angle In the correct way, the research sample personnel mainly who suffer from a sensory disability, which is deaf and dumb, so the process of synchronization and consensus have more complicated, especially since they were born hearing alert, and (Rajendran & Roy :2011) The children who suffer from hearing loss and the imbalance in sensory regulation, as this leads to poor balance and motor efficiency and in many fields, especially since the sample members were chosen who suffer from deaf and condolence dumbness, but training for long periods has provided a better opportunity for synchronization, especially after progress Age. Likewise, between the synchronization and the speed of the start of the ball, and for both sides, the existence of a direct link to the right and the left, and in both cases of evaluation, is due to the reason that the arrival and the appropriate timing with the ball leads to the fact that kicking the ball is better in a way that directs the power that causes the movement of the ball at a suitable point, which is a point The impact of the strength required to move the ball in the appropriate direction without making an exaggerated rotation process, meaning that directing the force at a point is closer to the center of the ball weight works to benefit from the application of Newton's law in the best way without dispersing part of the force for the events of the sphere of movement in the ball and thus prolonging the ball track than It increases the time of aviation and consequently a decrease in the values of the speed of the ball, and the power effect is one of the most important characteristics of strength. (Talha Hossam El -Din & others : 1997) indicates that this point is "the subject of the influence of strength for the body under its influence" and that this strength is the main source of increased speed The ball in order to achieve the primary goal of the scoring process, which is to deliver the ball to a point far from the goalkeeper and quickly (Susan , J : 2011) is the (force = the mass x) exhaustion and it is worth noting that the speed collected is largely applied in kicking the ball and that trying to direct the speed to the man behind the center of the ball means that the angle is the least possible to achieve a great result which is the speed of the final ball and here the role of the kick type is the role of the kick In the guidance, which is next to the internal foot (the sole of the foot), which is when the side of the inner foot is directed, which leads to an increase in the outcome of the speed and is mentioned (Abdul Baqi & others:2011) The kick of the ball differs in terms of form and this difference is depending on the area of contact with the ball and foot as well On the area in which the ball is stolen, that is, the direction of the kick at the center of the ball gives a specific characteristic of the path, and the speed of the ball increases as the power effect point is close to the angle of the ball.

The results showed that there is a relationship between the synchronization and the angle of the start of the ball and for both directions from the goal, and it seems that reaching the place and the correct timing that enables the player to achieve biotic variables that contribute to achieving a valid angle that achieves the purpose that the scoring seeks to be as much as the ball as much as possible from the goalkeeper or the players' feet. The defenders in the case of playing, and if the required synchronization is not available, these variables will not be achieved, including the angle of the righteous man's knee or a point and the position of the analogy, which is one of the important factors that provide a high path for the ball if it is somewhat late as well as the angle of the body's tendency, as reaching the ball is late. It leads to kicking the ball with a path and angle that moves away from the top of the goal, as the opposite is in the case of reaching early, which is that the ball is directed towards the bottom of the goal or in a place that mediates the lower and upper angles, meaning that the path is inappropriate and it is possible to object to the ball and indicate (Mazen Dawood : 2008) The player is trying to increase the value of this angle by kicking the ball at a point that is almost close to the ground and thus produces this angle, and that the angle of the body of the body was the reason for the exit of you. This angle, and this is what he referred to (Porossos :1990) The angle of the inclination of the body is linked to the degree of the height or decrease in the angle of the start of the ball, and it is worth noting that the skill of scoring the soles of the foot is difficult to direct the ball towards the top due to the difficulty of moving the ankle to the top while kicking the ball with the soles of the foot is better in that, especially if it kicks. The ball in this type is usually from the bottom of the ball, so it is more appropriate in directing the ball towards the upper corners of the goal, and this type of kick is of great importance in performance that players use in abundance and many cases and this is due to the ease of controlling and controlling it in terms of directing the ball through the part. What the ball touches the foot, and therefore this kick is one of the necessary elements that the player must master well and this kick prefers to score because of the player's possibility through it to control the ball with precision and strength (Youssef lazem : 1999) In synchronization, given that the speed of approaching the player is less and the direction is better due to the benefit of time for the movement of the ball and the face of the ball better and the opening of the two legs. bio kinematic is better despite the difficulty of directing the ball to the upper corners more difficult, but directing the ball to the side is more easier than scoring in another style and another part of the foot. . A correlation between synchronization and accuracy and both sides of the right and the left and in both cases of evaluation of synchronization, this is due to the fact that accuracy requires the integration of performance and the control of its bio kinematic variables as well as the bio kinematic which is an important factor in building the biotic variables, as the reason for those variables that appear from the movement is the strength and this is what It is stipulated in Newton's First Law (Susan J: 2011) This skill is to achieve the best distance with the availability of the element of accuracy, as the purposes of the skill differ according to the sports activity required by it, as the accuracy is considered according to what is described by (Amer Rashid Shatul :1998) is "a kinetic characteristic of a skill performance implemented by any party or part of the body and if the performance is carried out With a high degree of compatibility, it achieved accuracy in injuring the goal or any specific location, in response to an external or internal stem. The final looks at that performance and

the best possible, and that the synchronization is an important variable in achieving the variables that provide a suitable path for the ball, which achieves accuracy as required and that any failure in the timing and synchronization process leads to inappropriate variables or requires an amendment in one of these variables in proportion to the delay. The result of reaching the ball is the required timing, and this amendment may reduce the level of accuracy if the scoring does not fail, and this is what we eat (Amal & Mahmoud 1999) that the mechanical basis for accuracy lies in the appropriate dealing with the status of kicking, the player's focus and the relationship of other parts of the body that has the important role. In motor performance, that is, how to deal with the appropriateness of the ball, which has the effective role in the success of performance effectively, and that mental processes and sensory receptors are an important element in achieving the required synchronization and thus achieving the desired accuracy, and this is absolutely, but this does not contradict in any case, whether the research sample is from the healthy or from the deaf and dumb category and the difference may be in the weakness of the synchronization of the research sample, but this shows the same relationships and therefore this matter is important and it must be coordinated with a good level in order to achieve accuracy. Figure (2) explains that relationship.

Figure (2)

The relationship between the synchronization (temporal evaluation) with the accuracy of the right and left side



Conclusions

1. The synchronization of the evaluation has a relationship with the bio kinematic variables that were studied except for the knee angle variable for the pivot man and the trunk angle variable at the moment of scoring.
2. The synchronization of the two evaluations, which are indicated in accuracy in an effective manner, and the relationship with digital and decisive evaluation was directly, but the relationship in the evaluation time is better when time is limited between 0.93-1.06 seconds.
3. The sample individuals suffer somewhat from the weakness of synchronization, and this is confirmed by the results of the synchronization

of both evaluation, and it was after passing the mid-circle area and the time evaluation of synchronization that clarifies this.

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