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The effect of special exercises according to the work done using the Foot Scan to develop the energy transfer indicator and the accuracy of aiming from the angle area of the hand roller

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ABSTRACT

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Shooting in handball is one of the most important basic skills, as hitting the goal is the final result of the team's effort and the decisive factor in determining the result of the match as the boundary between victory and defeat, and shooting from the corner area is one of the most difficult types of shooting in handball, as it requires high skill, due to the narrowness of the shooting angle and the proximity of the scoring area to the field line, as well as the presence of the opposing player and the goalkeeper of the opposing team, which makes accuracy the decisive factor in the success of the shooting, and it is certain that The success of the player in performing the basic offensive skills, including the accuracy of shooting, does not depend only on the development of physical and skill abilities and the design and construction of tests, but also on taking into account the distinctive mechanical aspects of performance, believing that these exercises prepared according to the variable of the work performed, the variable of kinetic energy, and the latent moment of support and push will contribute to addressing weaknesses and trying to improve and develop performance. The researchers noticed through their interest and follow-up of the game of handball as well as their specialization in biomechanics that there is a weakness in the accuracy of shooting from the corner area and the lack of exploitation of the transfer of energy through the correct motor path of performance as well as the lack of interest in this center despite the fact that it is considered one of the very important centers in the game of handball and that the goal of the research is to prepare special exercises according to the work done using the platform to measure strength To develop the index of shooting accuracy from the corner area and the energy transfer index of the corner players of the advanced clubs of Diyala and Karkh in handball. As for the research impose, there are statistically significant differences between the results of the pre- and post-tests between the biomechanical variable of the completed work and the energy transfer index and the accuracy of shooting among the players of the Zawiya area of the Diyala and Karkh clubs who are advanced in handball.

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1- Introduction

Sports events took another form to achieve progress and achievement, and thus work began to introduce applied sciences such as physiology, anatomy, biomechanics, kinesiology and other sciences in training processes, and shooting from the corner area is one of the most difficult types of shooting with handball, as it requires high skill, due to the narrowness of the shooting angle and the proximity of the scoring area to the field line, as well as the presence of the opposing player and the goalkeeper of the opposing team, which makes accuracy the decisive factor in the success of the shooting, and in a way that is inevitable for the shot player. From the point of view, he must possess special specifications, including the accuracy of aiming and the correct motor performance from a mechanical point of view, and it is certain that the success of the player in performing the basic offensive skills does not depend only on the development of physical and skill abilities and the design and construction of tests, as well as the phenomenon of kinematic motor errors that accompany the performance and the energy transfer index between the joints of the body, so scientific solutions should be developed through effective training means to develop the physical and skill abilities of the players according to the correct biomechanical conditions during the application of The vocabulary of the training curriculum and knowing the extent of its impact on the development of the energy transmission index, as well as the accuracy of the skill performance of shooting by jumping high to open the largest possible distance. Biomechanics helps us to search for mathematical movements mechanically, anatomy, physiology and physics, deriving its information from them, as the connection between the physical and anatomical aspects and the mechanical aspect we can identify the best performance and the extent of this performance to the correct movement minutes and its engineering and temporal paths by discovering errors in the flow of movement, knowing their causes, working to avoid them, and knowing the strengths and weaknesses in order to achieve the scientific foundations of movement in an elaborate manner, and biomechanics is related to kinetic analysis and requires the right In kinetic analysis, you must have complete knowledge of the laws and mechanical factors affecting movement. Researchers agree with (Aref and Mohsen: 1989: 156-158) that shooting from the angle is characterized by difficulty because the defender stands in front of the attacker on the goal area line, which requires the attacker to jump forward towards the (4) meter line parallel to the goal line while keeping the ball out of the reach of the defender. In this type of shooting, we assume that the right player shoots from the right angle on the right. The goalkeeper aims the player from the left corner to the left of the goalkeeper for the purpose of opening the angle of the shot despite the proximity of the target arm to the defender. Therefore, physical exercise is one of the most important means used in developing and building the body and maintaining a healthy body if it is performed at regular times and correctly during the training process (Muhammad Ali: 1998: 17). Accordingly, physical exercise is a set of physical movements performed by different body organs according to scientific principles and foundations based on physiological, anatomical, and natural foundations and the repetition of these exercises once or A number of times and according to the individual's ability (Shaghati: 2014: 281). Accuracy is defined in its scientific sense as it means directing the movements made by the individual towards a specific goal, and this requires high efficiency of the

muscular and nervous systems, as well as the integrity of the senses, especially hearing, and this is confirmed by (Sobhy: 1995:459), as well as the researchers believe that the use of biomechanical variables in the kinetic analysis of the effectiveness of shooting from the angle area enables the player to identify the most important areas affecting the accuracy of the aim, in addition to that the aiming can be studied for one of several situations, such as dividing the aiming areas To several areas: primary, intermediate. etc. (JoséAntonio: 2013:64-66). This requires a high ability to exploit physical qualities and precision as well as a high skill in the art of performance.The handball player must be characterized by good physical qualities in order to be able to achieve the biomechanical requirements of skill performance, such as approach angles and push angles, and moments of shooting movements, which allow the player to be highly skilled to be able to perfectly invest his internal forces and score the goal, and this is confirmed (Al-Fadhli: 2007: 16). The moment of getting up and with high force thrust and good motor momentum. The importance of research is highlighted in how to develop the shooting accuracy index and the energy transfer index from the corner area of handball players according to the scientific foundations, by preparing special exercises according to the variable of the work done (force x distance traveled) and extracting the force through the strength measurement platform) (**Foot Scan**).He believes that these prepared exercises will contribute to addressing weakness and trying to improve and develop performance (energy index and shooting accuracy), especially from the corner area, which is considered one of the most difficult positions in shooting for handball players.

2. Research methodology and field procedures:

2-1 Research Methodology:

The researcher used the experimental method to suit the nature of the research and its requirements, as the experimental method is the most used method in the field of mathematics because it is based on direct and realistic dealing with various phenomena (Anan: 2004: 84-85).

2-2 Research Population and Sample:

Therefore, the researcher selected the research sample by deliberately representing the male handball players of the (Karkh and Diyala) sports clubs for the sports season (2024-2025), which numbered (35) players, and the experimental sample was on (8) players representing the angle for both regions, four players for each club, with (4) players on the right and (4) players on the left. The percentage of the sample of the research sample was (22.85%).

2-3 Means of Information Collection, Devices and Tools Used:

2.3.1 Means of Information Collection:

Arab and foreign sources, personal interviews.

2.3.2 Devices and Tools: (Kinovea) analysis software for analyzing movements and determining the completed work variable, (1) Hb calculator, 3 camera holders, 1 m height scale, Japanese made Casio-Exilim digital camera , with a high speed of photography up to (1200) r/s, set to work at 210 r/s. (1), 3 digital camera at a speed of (25 r/s), Japanese-made electronic stopwatch (Sony) type for time recording, adhesive tape,

precision iron boxes (50x 40), legal handballs (8), indicators (30 cm) (6), legal handball goal, phosphor markers (30), data dumping form (10).

2.4 Field Research Procedures:

The researchers relied on the accuracy test of the angle aiming that was built by (Faisal: 2013: 65-66)

2.4.1 Aim from the corner area of the handreel.

Test Name: - Aim from the corner area of the handreel.

Purpose of the test: - Measure the accuracy of the aim from the corner area of the handball for the two areas.

Tools: (8) legal handballs, whistle, 4 (40×50) precision squares, adhesive tape, (3) indicator, legal handball court, handball goal.

Test Planning: The corner area on both sides of the field is divided into two areas on each side for the start of the shooting process by marking with duct tape marking each area (5.2 meters) away from the goal line and the second area (5).3) Meters, then the markers are placed over the end of each area in order to start the shooting process as shown in Figure (1).

Performance Description: The player stands in the designated area especially for each area (the first and second) to start the shooting process and is holding the ball, and when the whistle is heard, the player performs the full movement of the shooting skill on the precision squares on the goal in sequence starting from a square (A) Then (B) then (C) then (D) . with (8(Attempts per box)2) Try.

- **Test Instructions:** The line (6) meters may not be touched, which is considered a wrong attempt when aiming from the three zones.
- If you take more than (3) steps, it is considered a wrong attempt.
- Each region has (8) attempts.
- **Scoring:** Grade (2) is calculated if the ball enters the accuracy box.
- Degree (1) is calculated if the ball touches the circumference of the precision square.
- A score (zero) is counted if you don't enter or touch the accuracy box.

2.4.2 Identification of biomechanical variables:

After reviewing the studies, researches and theoretical materials in the specialty and by agreement, some of the most important biomechanical variables of the skill of aiming from an angle were identified, represented by the measurement of (completed work, kinetic energy, and potential energy).

2.4.2.1 Foot Scan Device: An electronic rectangular platform that gives digital data and data in the form of curves to measure the dynamics of the applied force as well as the pressure zones in the foot when it comes into contact with this platform and contains digital sensors with high frequencies.

2.4.2.2 Completed work: represented by the product of the force multiplied by the distance traveled to reach the player's center of gravity and its unit of measurement in the Joule (Al-Fadhli: 2010: 84-89) Completed work = force × distance traveled

2.4.2.3 Accuracy Indicator: This index was calculated by dividing the result of the accuracy of the aim by the test time and according to the approved test instructions. Example of the number of shots on the accuracy boxes over a period of time, the accuracy index will be as in the example: - Accuracy index = the sum of the successful shots on the accuracy/time square. For example = 8 / 70 = 0.114 numbers/s.

2.4.2.3 Mechanical Energy Transmission Index (Al-Fadhli: 2010: 157).

The energy transfer index is one of the mechanical indicators that gives a real explanation of the type of kinetic transmission accomplished in the moments of ascent in all jumps, through the relationship between the angle of departure (the moment of flight) and the mechanical energy (the combination of kinetic and potential energy) accomplished at the moment of ascent in the moments of support and thrust, it is known that each of the pivot moments has two important stages, namely the support stage and the propulsion phase, and for each stage we can calculate the mechanical energy of its two types (latent and kinetic) which ultimately constitutes the mechanical energy Therefore, we can now divide this energy, as mentioned earlier, according to the pivotal moments in the process of advancing to:

Total energy at the moment of resting, which consists of kinetic energy and potential energy.

The total energy at the moment of thrust, which consists of kinetic energy and potential energy.

Total energy can be called at the moment of relying on the first total energy and at the moment of thrust.

With the second total power:

First Total Energy (Support) = Total Energy Moment of Support/Body Mass

The total energy at the moment of resting is the sum of the kinetic and potential energy at the moment of the first touch of the man's propulsive foot to the ground (elementary energy).

Second Total Energy (Propulsion) = Total Energy at the Moment of Thrust/Body Mass

It is the final total energy before the foot leaves the ground (before the moment of flight)

The significance of dividing the total energy by the mass of the body is to know the amount of this energy in joules per (1) kg of body mass. The kinetic energy at both the moment of support and thrust is calculated by the following law: kinetic energy = 1/2 kS 2, or potential energy is calculated by the following law:

Potential energy = K× C× P (p is the height of the center of gravity of the object and the measurement of the height of this center from the ground is calculated at each moment), so we can extract the decrease in energy, which is = the first total energy – the second total energy and extract the energy transfer index through the following law:

Energy Transfer Index = Angle of departure/energy decrease (d/joule/kg).

2-5 Exploratory Experiments.

2-5-1 The first exploratory experiment: The researcher conducted this experiment for kinetic analysis (for the mechanical variable, the completed work, the kinetic energy, and the potential at the moment of relying and pushing) on a sample of the research population consisting of (3) players, on Friday at four o'clock in the afternoon, corresponding to (10/5/2024). **The first exploratory experiment targeted the following:**

1 - Knowing the appropriateness of the places where the cameras are placed during the video analysis from the angled areas (2.5 m) and (3.5 m).

2 - Knowing the difficulties and problems when implementing the visualization, and training the assistant team in photography.

2.5.2 Second Exploratory Experiment: The researcher conducted this experiment for the special exercises of the completed work variable prepared by the researchers on a sample of (3) players on Friday (17/5/2024). **The second exploratory experiment targeted the following:**

1- Knowing the suitability of the exercises with devices and aids for the level of the sample.

2 - Knowing the difficulties and problems when performing these exercises.

2.6 Main Research Procedures

3-6-1 Tribal Test: The researcher conducted the pre-tests on Friday and Saturday (24-25/5/2024) at four o'clock in the afternoon and in the hall of Martyr Abbas.

In Baquba/Diyala Governorate, the researcher tested the accuracy of shooting from the angle for the areas (2.5) m and (3.5) m and analyzed the variable of the work completed, the kinetic energy and the potential at the moment of support and push at four o'clock in the afternoon and in the same hall as well. The researchers fixed the conditions, the method of conducting the tests and the auxiliary work team in order to achieve the same conditions as much as possible when conducting the post-tests

3.6.2 Application of special exercises prepared according to the biomechanics variable (work done):

Objective: To develop the correct performance of power transmission and aiming accuracy from the corner area.

Training Module Time: The total training unit time was (120 minutes) and the time taken for the independent variable of the special exercises was an average time of (30-40) minutes.

Number of training units: Three training units per week, which included (36) units during the main trial period.

Intensity used: from (70%) to (95%) according to the course of the training unit.

Training methods used: interval training of both types, repetitive training.

Load rationing mechanism: according to the intensity of the exercise and the target intensity of the method used, the variable being researched and the target pulse.

Training Ripple Mechanism :(2:1) according to the adaptation mechanism.

The researchers identified a set of special exercises to develop the shooting accuracy index and the energy transfer index from the angle area for the two areas (2.5 m) and (3.5 m) (right and left) through the training curriculum prepared for this purpose, taking into account in the vocabulary of the training module the training loads of the players, as a set of exercises was prepared at the rate of (3) training units per week for Sundays, Tuesdays and Thursdays for a period of (10) weeks, as the number of training units in the

curriculum reached (30) training units. The special exercises were centered and prepared according to the work done (force in the distance traveled) related to the energy transfer index and the accuracy of shooting from the angle area to the areas (2.5 m) and (3.5 m) and according to the intensity of the exercise in the training module for that day and its objective. As for the exercises that were applied by the researchers within the training curriculum of the sample, their time in the main part of the daily training unit was at the rate of (30-40) minutes and (2-3) exercises in the training unit, and in order for the trainer to decide which work units are suitable for the special training unit.

3-7 Post-tests: The researcher conducted the post-tests on Monday and Tuesday, 17-18/8/2024 at 4:00 p.m., at the Martyr Abbas Ibrahim Hall in Baquba to determine the final results of the testers and compare them with the pre-tests in the accuracy test of shooting from the angle area (2.5 m) and (3.5 m), and analyze the variable of the completed work, kinetic and potential energy, so that the researchers can know the difference between the pre-tests and the post-tests and the extent of the effect of the special exercises prepared for the research sample according to the work variable. Accomplished (strength in mileage).

2-7 Statistical Methods**: The researcher used the Social Sciences Statistical Package (**SPSS).

3. Presentation, analysis and discussion of the results:

3-1 Presentation and analysis of the results of the differences between the medians and deviations of tests for the biomechanical variables of the work performed from the angle (right and left) of the area (2.5 m) and (3.5 m) in the pre- and post-tests of the research sample members and their discussion as shown in Table (1).

Significance	Line Ratio	t	A.F.	Q F	Impact size	on	Going to	Variables	
Moral	0.010	-3.25	104.523	-107.476	0.807	166.597	571.970	Before me	Completed work for the area(2.5) m
						169.474	679.446	Go away	
Moral	0.001	-4.654	77.280	-113.730	0.956	216.183	382.790	Before me	Completed work for the area (3.5 m)
						251.251	496.520	Go away	

Through Table (1), which shows the differences between the pre- and post-tests, the arithmetic average of the payment variable **for the area (2.5m)** for the pre-test reached the arithmetic average (**571.970**), and the pre-standard deviation was (**166.597**), and the value of (effect size) was (**0.807**), the calculated value of (t) was (**-3.25**), its error rate was (**0.010**), and the mean of the two calculations of the differences was (The differences between the pre- and post-tests of the **thrust variable for the area (3.5m)** of the pre-test reached the arithmetic average of (**382.790**) and the standard deviation of the pre-test was (**216.183**) and the value of (effect size) was **(0.956**) and the calculated value of (t) was (**-4.654**) and its error rate was (**0.001**) and that the average of the two differences calculations was (**-113.730**) and that the standard deviation of the difference was (**77.280**). **The researchers attribute these differences to the following:** Regarding the mechanical work done for the area (2.5 m) to the significance of the mechanical work efficiency variable between the pre- and post-tests of the individuals The research sample is due to the specificity of the studied variable, as the origin of efficiency depends on the ratio of the inlet and outlet, and in all cases, most studies depended on the amount of work produced, and since the amount of force produced was within relatively close limits, the difference in matters was the amount of distance or displacement achieved (work = force× distance), and he finds The researchers explained here that the quotient of the significant change between the pre- and post-tests for the region (3.5 m) was in favor of the post-test with a clear increase in the arithmetic median, and the researchers interpreted this as a tangible and real increase in one of the two components of the occupation that makes up the efficiency variable, implicitly, as the increase in one of the two variables at the expense of another or the increase in it is the result of the increase in the overall level, and this is confirmed by (Abdulkarim and Alwan, 2012): 219-220) (Therefore, the

elastic feature of the muscles gives a greater output in the occupancy of this muscle, and if this work is to be developed, the trend is to develop the maximum strength of the muscle, which is the limits of its maximum length), and the researchers have confirmed that the work done by the reaction force of the ground can be calculated by determining the area under the curve, and the work can be calculated by the weight of the body by the **Foot Scan** device., by reading the Earth's reaction force curve when doing the downward spiral). Researchers attribute this to the logical result of the increase in force related to the result of the efficiency of mechanical work, and this is what expresses the increase in the post-test compared to the pre-test, despite the entry of time as an influential variable, but the functional adaptation represented by the player's level of energy relative to the amount of thrust he produces was in favor of increasing the efficiency of mechanical propulsion, which is expressed in the form of the final performance of the skill, which is characterized by aesthetics, coherence and harmony, and this is confirmed by (Abdulkarim and Alwan: 2012: 208) (The development of muscular strength working in the skill will work to develop the force force, body tension and force thrust, which are the mechanical factors that are related to the performance of most sports movements).

3-2 Presentation and analysis of the results of the differences between the medians and deviations of tests for the variables of the accuracy index from the angle (right and left) for the area (2.5 m) and (3.5 m) in the pre- and post-tests of the research sample members and their discussion as shown in Table (2).

Significance	Line Ratio	t	A.F.	Q F	Impact size	on	Going to	Variables	
Moral	0.000	-6.079	1.608	-3.091	0.251	0.908	4.756	Tribal	Accuracy Index for Area (2.5) m
						1.575	7.848	Dimensional	
Moral	0.013	3.087	3.074	3.002	0.265	1.585	3.573	Tribal	Accuracy Index for Area (3.5) m
						3.088	6.575	Dimensional	

Through Table (2) **of the pre-test of the accuracy index for the area (2.5 m),** which shows that the arithmetic average has reached (**4.756**) and the standard deviation has reached (0.908), while **the post-test** of the accuracy index shows that the arithmetic average has reached (7.848), that the standard deviation has reached (1.575), that the arithmetic average of the difference has reached (-

3.091), that the standard deviation of the difference has reached (1.608), that the value of (effect size) has reached (0.251), and that the value of (t) has reached (t).) calculated was (-6.079) and its error rate reached (0.000) and the level of significance between the two tests was significant. Also, through Table (2) **of the pre-test of the accuracy index for the area (3.5 m),** which shows that the arithmetic average has reached (6.575) and the standard deviation has reached (3.088), while **the post-test** through Table (2) which shows that the arithmetic mean has reached (3.573), the standard deviation has reached (1.585), and the arithmetic average of the difference has reached (3.002), and the standard deviation of the difference has reached (3.074), and the value of (the size of the effect) has reached (0.251) and the value of (t)) calculated as (3.087) and its error rate was (0.013). The level of significance between the two tests was significant. **Researchers attribute the reasons for .**The researcher attributes this to the effectiveness of the special exercises carried out by the trainer on the experimental sample, the length of the curriculum, the effectiveness of the players, their desire to implement the vocabulary of this method, and their direct commitment to implement the duties required of their coach in implementing these vocabulary effectively and regularly and using devices and tools, especially where they were trained gradually. Easy to difficult, as the use of devices and tools is a contributing factor in the development of skills, and researchers agree with (Nassif and Hussein: 1978: 69-70) through the exercises that have been developed: "Abstract training using only the tool does not lead to reaching the best result, so we note that there is a set of auxiliary tools that the players use and according to the instructions of the coach to cover the deficiency, whether in the skill or physical aspect, and **the researchers also attribute reasons** to The differences in the accuracy index for the area (3.5) This is what the researchers explain to the fact that the relationship between the aim result and the thrust variable and the final outcome is that the process of executing the skill in a fast and perfect way requires the player to perform the movement in its correct technical form, which must be somewhat identical to the biomechanical conditions, which in turn will enhance the explanation that the correct motor performance is based on controlled movement molecules, and this is confirmed by (Majeed: 2014): 150) That focusing on the factor of time and the optimal force required to perform the movement and the results of these two elements will result in an optimal force push according to the requirements of the skill or the desired goal of the movement, and that the time factor had a decisive role in determining the effect of the force imposed during a specific period of time in the speed and accuracy of the performance of the long aim, and this is explained by (Al-Fadhli: 2010: 83) that "force pushing is the measure of the effect of force on the body during the given period of time. It is equivalent in the final time period at a specific complementarity of the initial defences of the force, where the limits of integration are limited to the beginning and end moments of the time period

of the force's effect. At the moment of the simultaneous effect of several forces, the sum of their deterrents is equal to their sum over the same time, since there is a thrust of any imposed force, even for small fractions of a second, such as ascension or jumping. The researchers concluded that this development of the accuracy index variable leads to the way to use exercises correctly, scientifically and accurately, and according to the correct biomechanical conditions, through the correct body position and use it in a way that allows the continuation of the transfer of energy, which is transmitted from the lower limbs to the upper limbs, in order to achieve the achievement in performing the skill of shooting from the angle.

3-3 Presentation and analysis of the results of the differences between the medians and deviations of the tests of the kinetic energy index variables (moment of support and thrust) from the angle (right and left) in the pre- and post-tests of the research sample members and their discussion as shown in Table (3).

Significance	Line Ratio	t	A.F.	Q F	Impact size	on	Going to	Variables	
Moral	0.000	3.75	3.55	4.55	0.246	5.77	9.213	Tribal	Kinetic energy Moment Supporting Area (2.5) m
						5.83	3.269	Dimensional	
Moral	0.012	10.49	77.06	215.94	0.256	3.105	279.4	Tribal	Kinetic Energy Moment of Thrust Zone(2.5) m
						9.102	3.495	Dimensional	

3-4 Presenting and analyzing the results of the differences between the medians and deviations of tests for the potential energy index variables (moment of support and thrust) from the angle (right and left) in the pre- and post-tests of the research sample members and discussing them as shown in Table (4).

Significance	Line Ratio	t	A.F.	Q F	Impact size	on	Going to	Variables	
Moral	0.002	10.49	77.06	215.94	0.211	3.105	4.279	Tribal	Potential energy at the moment of
						9.102	3.495	Dimensional	

									resting area(2.5)m
Moral	0.012	4.96	76.59	101.07	0.240	17.77	1.737	Tribal	Potential Power Moment Push Zone(2.5) m
						119.3	2.838	Dimensional	

Through the results proven in Table (3) and (4), it was shown that there is a significant significance, and this indicates that a significant development has occurred in the motor energy of the shooting skill in the post-tests in the (2.5 m) area, which confirms the effective positive effect of the exercises used in the training units, which led to the development of energy in the players, by increasing the number of repetitions and performing exercises with a motor path similar to the motor path of the skill so that it works to develop the physical and skill aspect in time Same. Researchers attribute this development to the way to use exercises correctly, scientifically and accurately, and according to the right biomechanical conditions, through the correct body positioning and using it in a way that allows the continuation of the transfer of energy, which is transmitted from the lower limbs to the upper extremities, in order to achieve the achievement in performing the aiming skill. The researchers attribute this value to the nature of the exercises that were used in the training modules, which aimed to develop the energy transfer index according to the variable of time, then speed and kinetic energy, not according to the height of the center of gravity of the player's body and the potential energy at the moment of resting, as the purpose is not to convert kinetic energy into potential energy by an exaggerated amount, but on the contrary, the goal of the exercises under study is to increase the value of kinetic energy at the expense of the value of potential

energy to improve the kinetic transfer and the speed of the transfer of the center. The weight of the player's body in a balanced and fluid manner without interruption and loss of energy, and this is confirmed by "Mahjoub & Badri: 2002, p. 90" that "motor transmission means the expression of a balanced, gradual and continuous transition through the parts of the body when performing the skill, as well as the transfer of force within the body from one part to another through the joints to generate great strength."

4- Conclusion: In light of the results of the research, the researchers concluded that there is a significant correlation between the accuracy of the aiming test and the variable of the work done from the corner area of the two areas (2.5 m) (3.5 m). Also, the variable of kinetic energy, potential energy, and instantaneous thrust variable in the area of (2.5 m) had a clear effect on the performance of the target skill, especially since the factor of time, which is one of its basic components, was the effective factor in terms of the product of force multiplied by its effect time. There is also a positive effect of special exercises for the angle area in the development of the shooting accuracy index from the angle areas (2.5 m) and (3.5 m) and the kinetic and latent energy transfer index for advanced handball players. This is through the results of the pre- and post-tests and in favor of the post-tests in the research methodology. Through the results of the pre- and post-tests it was found that there is a difference between the two regions (2.5 and 3.5) m in the following variables and the accuracy index of aiming. Based on the results of the research, the researchers recommend emphasizing the need to use other modern scientific means and techniques to study the momentum of the torso or the momentum of other parts of the player's body, and to pay more attention to the center of the angle, which is one of the important and essential centers in handball. Also, emphasizing on handball coaches, especially coaches of age groups, to pay attention to the development of some important biomechanical variables, related to speed and angles working on the joints of the body, in order to achieve the motor goal of the shooting process from the angle. Linking these studies through the methods used to develop the skill of shooting from the angle area (2.5 m) (3.5 m) with physical characteristics related to mechanical variables for the purpose of identifying the players' levels. Al-Fadhli (2010: 159) points out that "in various games, the player must check his speed during approaching and the amount of this speed he loses at the moment of getting up and the consequent perfect force thrust that is in harmony with the mechanical conditions of the body during this moment and with the momentum of forces and resistance moments achieved during this stage, which must be commensurate with a small loss of energy (total energy) during this stage and in order to achieve the best kinetic transfer of the player."

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