



The Effect of Special Exercises To Develop Explosive Power and Mechanical Performance Skills of the Arm Seemed To Be Aimed Javelin

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ABSTRACT

The explosive power represent the main duties mechanically, main kinetic analysis of the process and the best performance indicators with which, the level of the impact of the training process effect can be developed in a scientific form. The importance of this research lies in the importance of the effects of mechanical ability explosive arm aimed at the effectiveness of the javelin games arena and in the field and strive to find the best ways and methods for its development as one of the most important requirements for the players, javelin, and its impact in improving the performance level of the player and achievement alike. The study scopes to prepare special mechanical exercises with the upper parts and performance skills of the players javelin and field arena. Identify the effect of exercise in the development of mechanical ability of the party's explosive upper and skill performance and achievement of the player's javelin and field arena. The research hypotheses are vocabulary exercises a positive effect in the development of mechanical ability of the parties explosive upper and skill performance and achievement of the players javelin and field arena. The experimental method used for its relevance to the nature of the research and being the appropriate way to solve the problem. The researchers selected a research community with famous javelin arena and field participants in the championship ministry of education in Iraq stage. The researcher used the devices and the proper tools and the application of test technical performance technical seemed to throw the javelin and the researcher on the most important variables Biomechanical affecting the performance efficiency hen the results take to identified sections and analyzed in a suitable analysis software, the measured angles, heights, distances and times have been analyzed and conducted researchers experience exploratory then steps perform the search of pre-testing of a sample of research and exercise special and post-test of the sample and then the means of statistical and the researchers presented the results of statistical treatments to search data in tables and interpretation of test results for all variables of the study and both the experimental and control groups in the pre and post tests. The researchers concluded that there is a positive effect of exercise in the level of performance skills, representing in the high values of the variables studied when the result of the performance effect of these special exercises. The enhancement in experimental group power level and explosive most variables foot work under discussion was resulting of the influential act vocabulary exercises in a mechanical manner.

Keywords: Biomechanical, Throw javelin, and the explosive power.

1. Introduction

The modern requirements in the activities of chucking arena and the field has created a great need to enumerate the players numbers technically high, especially since the changes in the level of performance of modern linked to acceleration events with a high level of force, as well as the high level of performance skills of the players, and despite repeated the performance level of the player hard high in the performance of the effectiveness of the javelin and field arena the player will retain competence physical when try again.. and that show the importance of mechanical ability explosives components (power and speed) further to that the associated degree of adaptation laws mechanical control performance as one of the most important factors affecting the level of performance skills through competition, "player with explosive ability substandard faces the burden of Mechanical leading to pressure on the common parts of the body performance and thus reduce the level of performance. The explosive power represents the best duties mechanically main kinetic analysis of the process and the main performance indicators with which to measure the level of the impact of the training process and its evolution as scientific. Down to the highest level of performance skills, so that the identified effects of mechanical sports training demonstrates understanding of the coach how to respond and adapt to various body organs to carry the training and the laws of nature that surround the performance, which is one of the most important rules of Applied Science biomechanical (analysis movement) in the sports field (Abdullah Hussein al-Lami: 2004). "Every method and style of training has effects Vslgih and biomechanics and body effect related with and usage one of these methods or one of its forms is not enough for the development of appropriate and full of ability explosive". According to this fact adopted the researchers depend hypothesis supports the use of overlapping training and diversification big using the methods of training mechanized that will create a variety of effects and multi-functional devices, which will be reflected thus to increase the ability to adapt to the requirements of effectiveness of the players. The importance of this research lies in the effects of mechanical ability explosive (the Upper parties) the effectiveness of the javelin arena and in the field and the importance of seeking to find the best methods and techniques for its development as one of the most important requirements for the players, the arena and the field, and its effect on the improvement of the level of achievement of the player and alike in the same way.

1.1 Research Problem

The decrease of players shooters explosive ability, which is one of the obstacles faced of the arena and in the field game, which impede their development, the researchers noted that the majority of players Iraqi clubs and the different denominations suffer from volatility evident in the level of achievement, due to the decrease of ability explosive special players (especially the upper extremities, which is the final output directed to all the productive forces in parts of the body other), which leads to a slow case of hospitalization and fatigue early and to a lack of focus and the low level of overall performance (physical, technical,

tactical and psychological), which shows through the level of performance, as well as the inability to implement tactics Modern, which rely heavily on player skill in the performance duties, which is the main pillar of the concept of fitness of the players and field arena modern. The training method using exercises for effective and similar to the performance of the methods of training high-efficiency in the development of mechanical ability explosive the players and build on so that the researchers conducting this study, using special training performance skills of the parties upper detection exercises appropriate for the development of mechanical ability explosive and therefore the possibility of upgrading performance and achievement.

1.2 Research Objectives

- 1 - Get variables biomechanical the explosive capacity of the parties to the upper and skill performance and achievement of the player's javelin and field arena.
- 2 – Preparing special mechanical exercises with the upper parties and performance skills of the player's javelin and field arena.
- 3 – Study the effect of exercise in the development of mechanical ability of the parties' explosive upper and skill performance and achievement of the player's javelin and field arena.

1.3 Hypotheses Search

In light of the objectives of the research the researchers assumed as follows:
1 –for vocabulary exercises a positive effect in the development of mechanical ability of the upper parties explosive upper and skill performance and achievement of the players javelin and field arena.

1.4 Areas of Research

The human sphere: the effectiveness of players in the team javelin Iraqi National School 2012.

Temporal domain: from 1/1/2012 to 1/5/2012.

Spatial domain: the stadium (Diwaniya province).

2. Literature Review

2.1 Theoretical Literature

2.1.1 Mechanical Explosive Ability

(Wadih Yassin al-Tikriti, Taha Yassin Mohammed Ali: 1986): The capacity element is the main elements on which fitness depend because of its significant impact on the possibility of sports motor, effective sports organization never been with on this ability, which represent for a sporting a basic elements and assist in the accomplishment in all its forms in that event, training Sports tended to develop the capacity to be one of the factors helping to excellence sporting.

Mechanical ability is a measure of the speed of the increasing fill power, equivalent to the capacity of power in the given moment of time. The foregoing means that working on

variables mechanical ability of speed and time and labor to develop mechanically could be achieved mechanical ability cannot take it out only if there is exciting given any (serah Abdul Karim Alfezla, 2010). "It's impressive attempts to alter the body in terms of shape or movement by or direction", and based on the laws of Newton (Mauof Hantoush, and Saudi Amer:1988). Force "is influential works on the altered state of objects from sleep or movement in a straight line, not to mention that the force cannot show form proper only through speed and this means overcoming a series of resistors authoritarian on muscle force or muscle group working on this, the force "is the ability of the muscle to overcome the resistance or external face "(), and the ability required in terms of sports to pay or move or increase the speed of movement of the player arena and Almidanvi javelin, as well as it is a key factor so player can overcome the weight of his body when he tries to perform effectively and change its direction and speed of the network arena and field, so player can perform effective way idealism must be his muscles strong so that it can exert the effort required in the game under the pressure of the opponent, so the element of force must be provided in a different way because we find that the muscles of the legs are first and foremost must be a high degree of capability and indicates both Jensen and Fisher (Jensen and Fisher 1982) that the high level of ability muscle contribute effectively to achieve good performance, as the force of muscle a key role in improving the performance skills, and comes as a component of a special game arena and Almidanvi arranged prior to maximum power or carry power.

2.1.2 The Important Factors Affecting the Production Capacity of the Muscle

1. The time of the movement.
2. Common type of muscle performance fibers.
3. Physiological-sectional area of the muscle or joint muscles.
4. The ability to raise sufficient number of muscle fibers.
5. Tension angle of muscle.
6. Muscle contraction situation.
7. Degree of compatibility between the muscles involved in the work.
8. Performance technique.
9. Psychological factor (willpower).
10. Age and sex.
11. The nature and direction of the training as well as environmental and genetic factors, nutritional status and nature of the work.
12. The muscular contraction

2.1.3 Training Mechanical Ability Arena and Field

The training capacity mechanical in arena and field is the main pillar of the concept of fitness, it is system training serves construction and public sectors to the level of sports, so that the training requires upgrading physical attributes the main and physical attributes vehicle as well as raise the level of skill and tactical and psychological for the players and this was confirmed by Harrah's that training capability Special (Harrah's:1990). "Serves the direct construction of the level of sports in the hits private (Michael J. Alter , ph . D. 2001). which riveted the overall impact on the construction of the personal qualities of activities and

technique athletic ability and tactical ability fitness and the resulting harmony Pajulja and acted guideline", this link came to train the ability of the various aspects of preparing a natural result of being physical status and complex vector .The integrators system develop special ability is of great significance in raising the potential achievement of higher for the players, especially the player javelin Although there are a lot of testing theory and practice about the development of this system, there are questions about the modalities for the development of special ability did not take the way to the solution, it is still the views of scientists vary about the effectiveness of the methods used for the development of own ability level, that the problem of special ability comes from being frequently associated biological point of view and as such physical training compose power and speed Includes multiple aspects and expresses variables Vslgih the very complex .Integrate power system for the players arena and Filed of physiologically to adapt to devices functional they have with performance-term and higher intensity during the game, so there will be a state of harmony full of performance requirements and the level of adaptation vital organs, which makes installation and operations services functional optimize (Dick Frank . B. S. C: 2000). We have confirmed the scientific sources that there are three elements depends upon the development of the capacity for a volume, and intensity of pregnancy, as well as the ways and methods of training, there is a correlation between the volume and intensity of training and level of development of the ability of the players and the lifting constant intensity of training is a characteristic of special training ability with famous arena and field proved that the use of high-speed exercises severity is of great significance in improving the ability of private arena and field. The average intensity is of great significance in improving own extension ability. There is a positive relationship among the increasing values of the intensity of pregnancy since the beginning of the preparatory period and the evolution of the level of own ability and expression of distress here does not mean speed in the performance of exercise, but also means that the share of training power that leads strongly different in capacity Aries year, where "The level of development of special ability conditional through the influence of diversified and different intensity (K. A. Injassewski,1976) and this was confirmed by Aukrua (Okroy-1992) that "the impact of voltage strongly different long period of time affects the variables functional".

As for the method of training optimal for the development of special ability, (Qassim Hassan Hussein: 1985), he said most of the scientists on the need to diversify the great ways and methods and means of special training, and that the best way for the growth of speed and power, which affects the ability of arena and Field use the method of use of comfort in sharing exercise in the first place. the integration oriented views on the work of vital organs, which determine the level of special ability is through the use of methods and methods of various training and are nested as well as organizing and training methods in order to exploit the training time to the maximum extent possible, thereby increasing the volume of activity in the exercise (Meyners, E: 2000). Technique athlete of the effectiveness of the javelin for players play a general role in significance during the upgrade special ability because there is a relationship between the training technique and improve economic activity and can be accessed to the relationship from the interdependence and synergy legalized, "improving economic movement is by getting when training was difficult and high and composite. Gets by continuing training to reduce energy expenditure, so as to reach for the best players to

35% of the required values "(Wells . K . F., 2002). As the great development of the technically is seen as an improvement in the level of the players ability in arena and field that the most important problems in training tactic realized in how to divide the regulated voltage on the length of time of the game. Reputational training method in arena and Field is a method based on tensile fixed place of business (very quickly) similar to the performance of the skills arena and field with good use of rest periods and the change in the number of iterations, and time It takes each exercise between (20-25) seconds while giving comfort positive between iterations. Works training Recurring distressed high at the stage of special preparing to stir up the central nervous system, ranging intensity of the (85-95%) of the player's ability, and the resulting good agreement between the muscles and nerves which gives training Recurring distressed maximum greater opportunity for the development of each of the elements of speed ,maximum power , power characteristic speed , explosive power and extension maximum power and extension maximum speed, etc. (Kemal Dervis, Mohamed Sobhi Hassanein, 1984). These qualities vehicle have a direct relationship to the development of special ability for the player's arena and in the field, especially the effectiveness of the javelin, (Bastawisi Ahmed, 1999). This method is used mainly with young and youth when teaching movements and basic skills.

3. Methodology

3.1 Research Methodology

Researchers used experimental method for its relevance to the nature of the research and being the appropriate way to resolve the problem.

3.2 Search Sample

The Selected research community with famous javelin arena and field participants in the championship preparatory education Iraq stage preparatory with number of (16) Rami, was chosen as the players who have centers first eight and numbered (8) players, was to give each player (4) attempts to be a number of attempts the final (32) is an attempt to deal with them statistically were divided into two experimental groups and another officer and was selected players random choice by using the draw was divided into two equal groups by (4) players for each group. For the purpose of knowledge and reality test for variables biomechanical under study in experimental and control groups, the researchers measured these indicators In order to identify significant differences in the variables mentioned and to ensure equality of the two groups control and experimental test was used (t-test) of the samples independent between the two groups, as shown in table 1 and this is what qualifies researchers to do his research and the application of special exercises.

Table 1: Shows the community values and standard deviations and the value of (t-test) calculated for variable values biomechanical a tribal for testing two experimental and control groups of players, javelin in arena and field.

		variables biomechanical	unit of measure	pre-test		pre-test		Calculate value	result
				Average	stdeva	Average	Stdeva		
explo size	1	speed performance:	m/s	6.51	0.47	6.56	0.46	1.63	Random
	2	High starting point (the highest point)	Meter	1.72	0.183	1.72	0.183	1.67	Random
physical performance biomechanical	1	approaching distance:	meter	19.65	2.11	19.44	2.31	0.23	Random
	2	approaching speed:	m/s	4.31	0.23	4.39	0.24	1.67	Random
	3	the time of the last step:	Seconds	0.43	0.01	0.44	0.01	1.31	Random
	4	horizontal distance for the final step:	meter	0.94	0.159	0.93	0.164	0.62	Random
	5	maximum flexion of the knee joint:	angle	157.66	5.3	158.66	5.7	1.63	Random
	6	starting angle:	angle	34.70	4.66	35.21	4.83	1.54	Random
	7	starting speed:	m/s	15.37	1.86	15.41	1.88	1.24	Random
	8	Achievement	meter	43.2	5.7	44.07	6.11	1.7	Random

The tabular value (2.0) when the degree of freedom (38) and the level of significance (0.05).

3.3 Devices and Tools Used

- A video camera of the type (CASIO) Japanese-made high speed frequency of 300 pictures / sec (2).
- Handy calculator type (CASIO) Japanese-made.
- A computer (Dell Inspiron 1525) Malaysian-made.
- CD-type SKC Korean-made.
- Scale (length 1 m) has been developed to find out the real value of which appear in the film.
- tape To measure the lengths of tape players (sample).
- A device for measuring weight.
- Legal Stadium.
- Stopwatch.
- Boxes of different heights to jump.
- Cords and wires.
- Wall to measure the length of runway.
- Whistle.
- shaft (Number 10).

3.4 Means and Information Collection Tools

Researchers used the following methods to collect information for the research, that are :

- 1 - Personal interviews.
- 2 - Staff assistant.

- 3 - Tests.
- 4 - Sources and references Arab and foreign.
- 5 - Exploratory experiments.
- 6 - Training curriculum.
- 7 - Statistical means.

3.5 Tests Used in the Research

To take account of accuracy and objectivity in the results of the tests of the effectiveness of the javelin, researchers made adjustments to the test Hits mentioned, because of fundamental flaws in the tests mentioned is the emergence of a state of non-recurrence of the javelin under study.

As well as this amendment, he held the researchers change in the testing service for the experiment by selecting the number of attempts, as the researchers gave attempts at the event where favors many of the tests in this respect the task, and held the researchers some changes on the test service for the experiment by selecting the number of attempts as well as identifying the beginning of the player. The test was presented to a group of experts and specialists to find out the test's ability to measure achievement after making those changes, and in this form has become the ultimate test as follows:

3.5.1 Performance Test Technical the Effectiveness of the Javelin and Field Arena

The performance test Technical the effectiveness of the javelin throw arena and field performance effectiveness, according to the legal requirements of the game, and the sample performs effectiveness according to the virtual construction of the effectiveness of the stages.

3.5.2 The Objective of the Test

Extract variables biomechanical of attempts during the filming for the performance of the effectiveness of the javelin arena and field for each player physically and analysis stages and achievement.

3.5.3 Tools Used

Legal Stadium, tape measure, cameras filming type Vdioa (CASIO) Japanese-made frequency speed of 300 pictures / sec (2)., Whistle, the fee scale.

3.5.4 Description of Performance

Laboratory player performs the effectiveness of the javelin from the selected area at high speed and better achievement.

3.5.3 Recording Mode

Photo successful attempts to throw the javelin.

3.6 Video Recorder

Been marking the most appropriate place to put the camera, in line with the required angle to shoot the respondents to ensure that the required variables biomechanical the extraction.

The researchers used a video camera shoot of the type (CASIO) Japanese-made high speed frequency of 300 pictures / sec (2). For the purpose of filming a sample search through major search experience. Camera has been placed next to the player and after (5.25 m) and height (1.65 m) from the ground.

3.7 Variables Measured Biomechanical

The researchers relied on most important variables biomechanical affecting performance in the javelin arena and field through sources, references and previous studies have divided the variables into the ability of the parties' explosive variables for upper, and skill performance variables of effectiveness. Effectiveness of the javelin was divided as follows: First stage: approaching the second stage: locomotors transport. Third stage: the main stage (javelin) thus becoming variables biomechanical on as follows:

3.7.1 Peed Performance

It is a Mileage on the unit time and unit measured are (m / s), which is the ratio between the distance represented by the beginning of the arm movement aimed at the moment of leaving the spear at the time of this distance (measured after converting distance approaching the point of beginning of the movement until the end of the equivalent nature through drawing scale)

3.7.2 High Starting Point (the highest point)

Measured from the point of touching the arm to the tool measurement unit (meter) after converting the measured distance to the equivalent of nature through scale drawing.

3.7.3 Approaching Distance

It is the distance or the connecting line of the first step between the fulcrum man front and rear of the man player in the beginning of the movement to a moment ago javelin (break contact) and the measured unit (meter).

3.7.4 Approaching Speed

It is a distance approaching broken the unity of time, measured unit are (m / s), which is the ratio between the distance of approach represented by the beginning of the movement of the feet of his movement on the ground prior to leaving the tool to throw on time this distance (measured after converting a distance closer between the starting point movement until the end of the approach to the equivalent nature through drawing scale).

3.7.5 The Time of the Last Step

Is the time from the moment to leave the ground for man and the first touch of the land of men in end-stage approach and unit of measurement is the (second), and the time is calculated performance through software for measuring time.

3.7.6 Horizontal Distance for the Final Step

Is a line connecting the fulcrum man front and man rear of the player before the moment of leaving the earth to man the background and the first touch of the land from the man front at the end of stage approach (measured after converting the distance to the equivalent nature of the scale), and the unity of measured is (m)

3.7.7 Maximum Flexion of the Knee Joint

Knee joint angle is the angle between the line of the femur from the point of the hip to the knee joint point between the line of leg bone from the point of the knee joint to the point of the angle joint is measured from the back.

3.7.8 Starting Angle

It is the angle between the horizontal plane of the surface of the ground and the line passing through the points representing the center of mass of the body during the upgrade for the body to Odaan, (I: measured before leaving the ground, the second: the situation that follows the moment Turk directly, and have been calculated mainly from the computer directly. "

3.7.9 Starting Speed

Which is the ratio between the a distance of the starting represented by the the path of springboard spear from the moment of before the the legacy of arm aimed at to the moment of and his arrival the ground on the time of this the starting (measured after convert the a distance of the starting between the point of springboard tool to a moment before the legacy of arm aimed at a starting point spear when performance what its equivalent by nature from the during the Drawing scale) (unit of measurement m / s)

3.8 Analysis by computer (PC)

Computer analysis was performed the following steps: after been determined to be analyzed sections have, been moved to the program (Dartfish) version 5 position on the calculator as well as a program (Kinovea) as was measured angles and heights and distances and times to be analyzed.

3.9 Exploratory Experience

For the purpose of standing at the level of the performance of the devices used and tested and find out the negative aspects and variables that will face the work was conducted researchers experience an exploratory first date (03/10/2012) at the stadium to get to know how the team work and place of the experience as well as filming several attempts to (2) Players from outside the sample in the effectiveness of the javelin in order for the researcher to ensure the emergence of the movement is clearly in the experiment key, also has been identified distances and heights that must be developed and fabricated by the camera in addition to the application of exercise special to be checked the following things:

- determine the number of groups and ranged between (3-5) groups.
- determine the time of exercise performance in terms of select performance limits of the time (15-20 minutes).
- determine intra rest periods where select the time of rest between the groups up to (3-5 minutes).
- determine the number of iterations ranged up to (5-9) repeat.
- determine the time of rest between the frequency last up to (10 sec).
- determine the specific variables a user of aerobic exercise.
- the suitability of those special exercises for members of the research sample.

3.10 Action Steps

3.10.1 Pre-Test Sample

Been to hold the test tribal for a sample Find dated 18.3.2012 and so in The time the fourth pm of the two control groups subjects and experimental, researchers installs the special circumstances tests in terms of the place, time and the style of the test and a team work from in order to achieve the same circumstances, or what similar as much as possible when conducting the test posttest for a sample search.

3.10.2 Exercises

The researchers prepared especially mechanicaling exercises manner similar to the performance, which was a range of (8) weeks, has taken into account the researchers level training and employability physical and technical skills and tactical for the research sample, relying on references and sources of scientific knowledge of sports training and biomechanical sports arena and the field has included curriculum on (32) training module rate (4) training modules in the week where he sees (Cooper-1988) "to ensure the impact of training in the exercise of physical activity (4) times a week" .(Abdullah Hussein al-Lami: 2004), and the modules are distributed on Sundays - Monday - Wednesday - Thursday, noting that(Moatasem Gutuq: :1995). "the evidence scientific field and to confirm that the training module in one day and two days in a row followed by a day of rest is the best in the physical adjustment programs ".

It was the work of researchers intrusive in the main part of effectively javelin has contained a special exercises are governed by laws and principles of Mechanical distances

and times and angles have been extracted from the analysis of performance ideal for javelin in special and composite exercises (mixed) where linking exercises effective to develop the capacity explosive of performance skills, as well as theoretical side by explaining the method of functioning of the exercise and its requirements in terms of intensity, size and comfort so that they are connected to the objectives of the exercise.

The researchers used methods training Recurring taking into account the relationship among them according to effectiveness and privacy in order to develop explosive power level and raise the level of physical performance of the players.

The researchers took into account during the preparation of training modules as follows:

- 1 - Time of the training unit.
- 2 - The intensity of the training unit where the method has been adopted Cdd maximum because it is similar to the performance of ().
- 3 - The number of iterations of each Exercise in the unit training course.
- 4 - Number of training units per week.
- 5 - Rest periods between recurrence and the last.
- 6 - Gradient in difficulty from one exercise to another.

3.10.3 Foundations Put Special Exercises

The principles adopted by the researchers to develop their own exercises, which aims to develop the explosive ability own recipe and development level of performance skills of the players arena and field as was as follows:

- 1 - Diversification by using special exercises make the effectiveness of different basic mechanical laws take special importance in performance skills.
- 2 - Formed training method used and the special exercise techniques and change the percentage and types in accordance with the goal of training phases of the effectiveness of the arena javelin and field.
- 3 - Training load was increased gradually using pregnancy degree (1:3) because "the results (Harrah's - 1974) and (Matiev - 1977) and (Blattnov - 1974) stating that the use of the system of special exercises to increase the pregnancy and sudden change (regular) to raise the level of training intensity cramps and increases economic mechanical work (Bastawisi Ahmed:1999).
- 4 - To follow the principle of rotation is ideal for work and rest so that each player can perform all the exercises with high efficiency.
- 5 - To achieve the level of the ideal relationship between the components of pregnancy training (size, intensity, density) that help the arena player and field Ctfad the highest level in the implementation of the movements of a repeat of last and this leads to a good state of hospitalization relative efficiency of physical at the beginning of each iteration.
- 6 - The appropriate number of repeat between exercise and another.
- 7 - Determine the best time to rest between repetitions when performing exercises.
- 8 - The constant lifting of the gradient in the performance of exercise intensity as a characteristic of explosive power training.

3.10.4 Post-Test Sample

Post-test was performed on Saturday, 07/23/2011 at four pm, after the completion of the implementation of the special exercises and in the same way that tests conducted by the tribal itself as much as possible. .Statistical methods:

After the dump is data for the two of tribal and measurements posttest addressed statistically using Statistical Package (SPSS) as it Astkhrajt the arithmetical averages and deviations normative and (T-test) has been found for the samples asymmetric and interrelated to the expense of the differences between the tests.

4. Results and Discussion

The researchers presented the results of statistical treatments to search data in tables and interpretation of test results for all the variables of the study and both groups the control and experimental tests pre and post to see the reality of the differences between the two groups and the statement of the impact of the independent variable (exercise special), on according to scientific perspective flour in order to achieve the objectives of the research and assumption and to identify at the level of the dependent variables (mechanical explosive capacity of the upper parties and performance skills to throw the javelin) for the research sample, and it must be at level in the light of the goals in the exercise which was developed in the research the following paragraph view and analyze the results of tests for all the variables of the study and discussion.

4.1 Display the results of the differences in the values of biomechanical variables the explosive capacity of the upper edges and performance skills for pre and post tests of the experimental group of players javelin arena and field, analyzed and discussed:

Table 2: Shows the community values and standard deviations and the value of (t.test) the calculated values variables biomechanical and post tests of the experimental group of players, javelin throw arena and field.

	variables biomechanical	unit of measure	pre-test		post-test		calculate d value	Result
			Average	stdeva	averag e	Stdeva		
explosive power	1 - speed performance	m/s	6.51	0.47	7.47	0.82	3.19	Random
	2 - High starting point (the highest point)	Meter	1.72	0.183	1.81	0.118	3.896	Spirit
physical performance	1 - approaching distance	meter	19.65	2.11	20.89	20.54	1.08	Spirit
	2 - approaching speed	m/s	4.31	0.23	5.68	0.07	3.95	Spirit
	3 - the time of the	Second	0.43	0.01	0.32	0.03	4.91	Spirit

	last step	s						
4	- horizontal distance for the final step	meter	0.94	0.159	0.95	0.161	0.51	Spirit
5	- maximum flexion of the knee joint	angle	157.66	5.3	153.23	6.4	3.61	Spirit
6	- starting angle	angle	34.70	4.66	38.22	3.53	3.94	Spirit
7	- starting speed	m/s	15.37	1.86	17.26	2.06	5.16	Spirit
8	Achievement	meter	43.2	5.7	46.90	4.88	4.76	Spirit

The tabular value (2.04) when the degree of freedom (19) and the level of significance (0.05).

In light of the extracted data to members of the research sample is shown in Table (2) differences in the values of certain variables biomechanical when performing the effectiveness of the javelin in tests pre and post experimental group and as shown in the table above, the nature of the sample showed significant differences between the two tests pre and post in the values of the variables biomechanical, especially in acceleration performance skills as effectiveness depends javelin throw on a set of basic principles culled from theories and laws of motion to provide sufficient capacity in good training through information biomechanical performance Hits, which means understanding how performance in the range of information that will help determine the actions of movement required to complete This performance is the highest possible efficiency and with minimal effort, and concluded that the mechanical explosive ability when members of the experimental group had evolved significantly due to the effectiveness of the style of exercise for high-impact multi-faceted by taking into account used drills speed in various forms and spaces variety, that helped in improving the mechanical By controlling variables laws and the effectiveness and the movement of players and improve the general consensus and to assist in the process of adaptation to the requirements of the high physical (), furthermore through privacy methodology followed by the researchers, which aims to regulate the components of pregnancy training in terms of intensity and frequency and comfort to the extent that is working on the development of prescription ability explosive -style mechanical occasion, this as well as the development of the level of mechanical performance of members of the experimental group, which had the effect of reducing the time of the last step and change direction during the performance of the approach to upgrading (jump) in this test as one of the factors of the good level and rapid responses of the positions changing. (Bastawisi Ahmed, 1999), mentioned that "lengthening the path of chucking or pushment of the instrument is only domain for the possibility of exploiting the power of the player to generate the speed necessary for the start of the tool" This is confirmed by the experimental group by the results above and there was a thread high between the work of hip and torso shoulder and the level of motor performance because it works in close interdependence.

(Is God Ahmed Bisatti :1998) concluded that ((on the movements skills and technically require close cooperation and compromise in performance between all the parts and joints of the body, the good player train well reflected in the level of performance complex in the sporting activity practiced by (3). This is confirmed by (Abu Ela Ahmed) that compatibility is linked much of physical attributes such as speed, agility, balance and accuracy shows a link

compatibility as quickly as in the requirements of motor performance in terms of time, as they appear recipe agility, balance and accuracy requirements of the movement of the formal and spatial, ie move the body and its parts required accuracy during the sequence Kinetic and this is what led to the current achievement (4).

4.2 Display the results of the differences in the values of variables biomechanical the explosive capacity of the upper edges and performance skills for pre and post tests for the control group of players' javelin arena, and field analysed and discussed:

Table 3: Shows the community values and standard deviations and the value of (t-test) the calculated values variables biomechanical for pre and post tests for the control group of players, javelin throw arena and field.

		variables biomechanical	unit of measure	pre-test		post-test		calculated value	Result
				Average	stdev a	average	Stdeva		
explosive power	1	speed performance:	m/s	6.56	0.46	6.72	0.51	1.73	Random
	2	High starting point (the highest point)	Meter	1.72	0.183	1.76	0.21	1.87	Random
physical performance biomechanical	1	approaching distance:	meter	19.44	2.31	20.81	2.98	0.89	Random
	2	approaching speed:	m/s	4.39	0.24	5.58	0.19	3.97	Spirit
	3	the time of the last step:	Seconds	0.44	0.01	0.44	0.03	0.77	Random
	4	horizontal distance for the final step:	meter	0.93	0.164	0.92	0.117	0.62	Random
	5	maximum flexion of the knee joint:	angle	158.66	5.7	155.23	5.9	2.64	Spirit
	6	starting angle:	angle	35.21	4.83	36.72	4.65	2.10	Spirit
	7	starting speed:	m/s	15.41	1.88	15.98	2.1	2.77	Spirit
	8	Achievement	meter	44.07	6.11	45.53	5.88	2.08	Spirit

The tabular value (2.04) when the degree of freedom (19) and the level of significance (0.05).

In light of the extracted data to members of the research sample is shown in Table (3) and using the t-test for samples correlated to extract the differences in the values of certain variables biomechanical when the performance of the effectiveness of the javelin arena and field tests pre and post for the control group, as shown in the table above, the nature of the

members of the research sample showed a few differences between the values of some biomechanical variables.

In the opinion of the researchers and through follow-up of the units training curriculum training followed by the coach that evolution is little that has occurred at the level members of the control group balancing the development of the experimental group was the result of interest in the development of some of the physical attributes of the individual and not to focus on variables such mechanical while exercise special applied to members of the experimental group aims to develop mechanical both the explosive ability and performance skills made through the requirements of the performance Hits requiring angle airline greater access to the ball quickly and good strength (the ability explosive) when seeking to Walid prevailing for the ball in addition to benefit as much as possible of the speed achieved from approaching, and the development of aggregates muscle group of major animated edges higher for a period of time lies between (20-120 seconds) for field work under (20 seconds) is a form of main work ability explosive, and because speed moving based on the interdependence of power and speed and this is what the requirements Games and sporting events (Rissan Khuraibet :1988) .

4. 3 Display the results of the differences in the values of variables biomechanical the explosive capacity of the upper edges and performance skills to the test posttest for two experimental and control groups of players javelin in arena and field analyzed and discussed:

Table 4: Shows the community values and standard deviations and the value of (t-test) calculated for variable values biomechanical a dimensional test for two experimental and control groups of players, javelin in arena and field.

		variables biomechanical	unit of measure	pre-test		post-test		calculated value	result
				Average	stdev a	average	Stdeva		
explosive power	1	speed performance:	m/s	7.47	0.82	6.72	0.51	3.83	spirit
	2	High starting point (the highest point)	Meter	1.81	0.118	1.76	0.21	1.57	Random
physical performance biomechanical	1	approaching distance:	meter	20.89	20.54	20.81	2.98	0.23	Random
	2	approaching speed:	m/s	5.68	0.07	5.58	0.19	3.97	spirit
	3	the time of the last step:	Seconds	0.32	0.03	0.44	0.03	1.31	Random
	4	horizontal distance for the final step:	meter	0.95	0.161	0.92	0.117	0.62	Random
	5	maximum	angle	153.23	6.4	155.23	5.9	1.63	Random

		flexion of the knee joint:							
	6	starting angle:	angle	38.22	3.53	36.72	4.65	4.94	spirit
	7	starting speed:	m/s	17.26	2.06	15.98	2.1	3.24	Spirit
	8	Achievement	meter	46.90	4.88	45.53	5.88	4.76	spirit

The tabular value (2.0) when the degree of freedom (38) and the level of significance (0.05).

Table (4) circles calculations, standard deviations, and the values of (T) calculated for the test posttest for the two experimental and control mechanical ability explosive and performance skills and through results that show the effectiveness of the exercise of that was used, which was applied to the members of this group, where he was the method of mechanical user its impact on the development of the level of performance skills and the ability explosive through the formation of exercises used and change the percentage and types in accordance with the goal of training and resolve duty motor which is to reach the level of ability of the explosive as one of the main components of performance skills, which made the development level of the experimental group faster than the control group in the results of this test, which is an indication of the explosive growth potential significantly.

The traditional approach, which applied to members of the control group it contains exercises for the development of some of the physical attributes in addition to the force, but are not the focus and attention to the election exercises influential in the development of mechanical ability explosive as well as performance skills and this corresponds with what came in the sources of that(Qassim Hassan Hussein Mansour beautiful Anbuge:1988)" The main feature of the development of the ability explosive is the integration of mechanical energy achievement through the integration of my recipe speed and power during motor activity that is strongly similar to the races or approach her or higher in order to improve performance (Rissan Khuraibet :1988), so interpreted by researchers such progress that the traditional approach taken which applied to the members of this group was Includes many exercises that work on the development of effective, too, especially the javelin, in addition to strength training, as well as speed as the high level of physical attributes the public is reflected in the high state achievement Sports (Harrah's: 1990), and the evolution of the control group in the test results posttest is the logical consequence of that, but this development is weak balancing the development of members of the experimental group Valtthbyt insufficient level of achievement in the Hits Private caused by a failure to appreciate the mutual relationship between the mechanical ability explosive and performance skills fully as a unified process going in parallel through training, and this is what necessitated the researchers focus Baltknyk and technical performance during exercise of which appeared evident in the results of post-test of the experimental group and this was confirmed by sources that the training of mechanical recipe physical performance-related serves the direct construction of the level of sports in the Hits Private. This includes requirements for training and competition that riveted the overall impact on building special physical qualities and linked to effective and sports technique and employability skills and tactical and what is happening about it from a biological harmony.

The researchers conclude from the foregoing that the experimental group had outperformed the control group in some mechanical variables under study and statistically significant differences. Indicating a preference exercise special built on the basis of biomechanical in training, which led to the development of the variables (speed performance skills, fast approaching, the angle of launch, the speed of starting), which represent the main components of mechanical ability explosive for the members of the experimental group when compared to members of the control group that underwent the conventional method used and relied upon by the trainer and thus influence the final earned achievement of effectiveness.

5. Conclusions and Recommendations

5.1 Conclusions

Through the presentation and analysis of statistical data and discuss the results of the tests before and after the two experimental and control groups that have been obtained through radio record researchers reached the following conclusions:

1. The use of special exercises are based on a mechanical basis and for a period (8 weeks) at (4 times) per week to improve the ability of the Supreme funniest explosive performance and the effectiveness of the javelin.
2. There is a positive effect of exercise in the level of performance skills to throw the javelin midfielders, has appeared high in the values of the variables studied when the result of the impact performance of these special exercises.
3. The development, which received the experimental group in power level and explosive most variables footwork - under discussion - in the post-test was the result of the act affecting your the vocabulary exercises in a mechanical manner.
4. It can detect kinetic exercises that accompany the performance of this event once detected mechanical performance variables during the filming of effectiveness and analyzed to detect the exact details.
5. Any biomechanical change in the variables in the explosive capacity of the upper edges of the effectiveness of the javelin clearly affects the subsequent performance skills due to the stability of the determinants of performance, whether that is linked to the rules of the game on the one hand, or in terms of the exploitation of laws biomechanical the other hand.

5.2 Recommendations

In light of the results of research researchers recommend including the following: In light of the study carried out by researchers and the resulting kinetic analysis was developed some recommendations that the researchers hoped to take advantage of them as much as possible in order to reach high levels in the effectiveness of the javelin which is as follows:

1. Interest mechanical underpinnings, and the effectiveness of the training javelin and how to deal with it by stakeholders in order to serve the level of effectiveness in the game.
2. Need to focus on the application of the principles and foundations of mechanical variables explosive power and performance skills through training modules in line with the requirements of motor performance of the effectiveness of the javelin.

3. Interested to the mechanical underpinnings of performance stages and special approach by trainers and teachers through training modules to enhance the level javelin throw in the game that includes commentary and supply of some illustrative pictures and movies for the required skill.

4. Need to adopt the ideals studied for variables biomechanical and to assess the level of moving performance for our players to achieve the best sporting achievements game and field arena.

5. Conducting similar research to identify the extent of the correlation between physical elements and other important variables seemed to be mechanical effectiveness of the javelin in arena and field.

6. The need to hold periodic analytical tests (physical and mechanical) to see how the evolution of effectiveness as a result of exercise training, and how the body adapt to the requirements for effective achievement in arena and field.

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