

Study the effect of developing explosive power using weight training on pivot correction technique for handball players

دراسة أثر تطوير القوة الانفجارية باستعمال التدريب بالأثقال على تقنية التصويب من الارتكاز لدى لاعبي كرة اليد

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Received: 07/01/2021

Accepted: 04/03/2021.

Published:01/06/2021

Abstract:

The Object of the study aims to **identify Developing explosive power by using weight training on correction technique from pivoting of handball players**, for this purpose, we used the experimental method, On a sample composed of 20, probability randomly, and for data collection, we used a Tests For the lower limbs, And the upper limbs, test the shot force of the skill of correction from the thrust, After collecting the results and having treated them statistically System SPSS, we conclude the Evolution of the explosive force characteristic by using Weight training And its effect on the shooting skill from pivoting of the senior class handball players

Keywords: Developing Explosive Power, weight training, Shoot, Handball

المخلص:

تهدف هذه الدراسة إلى معرفة أثر تطوير القوة الانفجارية باستعمال التدريب بالأثقال على تقنية التصويب من الارتكاز لدى لاعبي كرة اليد، ولهذا الغرض استخدمنا المنهج التجريبي، على عينة قوامها 20، اختيرت بطريقة عشوائية احتمالية (طريقة القرعة البسيطة)، لجمع البيانات استخدمنا اختبارات للأطراف السفلية، والعلوية، واختبار قوة التسديد لمهارة التصويب من الارتكاز، بعد جمع النتائج ومعالجتها إحصائيا بنظام SPSS تم التوصل الى تطور صفة القوة الانفجارية باستعمال التدريب بالأثقال وأثرها على مهارة التصويب من الارتكاز لدى اللاعبين كرة اليد صنف أكابر.
الكلمات المفتاحية: القوة الانفجارية، التدريب بالأثقال، تقنية التصويب، كرة اليد.

I. The theoretical chapter

1. Introduction and problematic of the study:

Accordingly, sport in general and handball in particular has become a priority for specialists, as they give it great care and care in order to develop the game and take its practitioners to the highest level, by finding the most appropriate ways to reach sports achievement, while relying on modern training methods, foundations and scientific theories.

Where Handball has gained its share of these experiences, which helped to identify the most important factors that must be taken care of and focus on to reach the best level, among which the main factor that made us address this topic is highlighting the most important thing that a handball player needs, as we focused on the importance of strength. Explosive force, according to Muhammad Abd al-Rahim Ismail (2010, p. 396), is that: "The ability of the muscular nervous system to overcome resistance that requires a high degree of contraction is important in the development of muscle strength and is carried out by means of explosive force", meaning muscle contraction Bastwissi defined it by saying, "The explosive force adjective means the highest dynamic force that a muscle or muscle group can produce once" (Bastwissi Ahmed, p. 112, 1999).

Abu Al-Ela Abdel Fattah indicates that weight training is one of the most important types of training that contribute to improving physical abilities, the most important of which is the optimal use of rubber energy reserves in working muscles, and this is known for its role in lengthening and shortening (Abu Al-Ela Abdel Fattah, pp. 73, 1997).

However, weight training remained the subject of controversy for a long period of time among specialists in preparing and training handball players, some of them opposed the idea of weight training under the pretext that it reduces the speed and increases the degree of stiffness in the muscles, and some of them supported the idea of training with weights as a way to develop different types of

muscle strength Needed by any player, which contributes to the development of skillful performance.

This, correction is one of the basic skills in handball, because correction is the conclusion of all offensive movements, and the focus is one of the important qualities that must be met by handball players.

2-Research problem:

The rapid development in achieving global sporting standards in various fields of sport, whether in group or individual games, is in line with the technology of training science, and upgrading this level did not come from a vacuum rather, science was and is the basis. (Albassati, 1998, p1),

Since ancient times ,handball is the most popular sports in terms of team games, requires many qualities and muscular strength is one of the most important of these qualities that handball players and all its forms need maximum strength and explosiveness, which is characterized by speed, and also, we do not forget the skillful aspect. Among these skills, the shooting skill from the pivot, which is one of the basic and important skills in the game of handball, and by which the largest number of goals are scored, that is, it is the skill that determines the outcome of the match (Ahmed Fathy Hadi, 2010, p.57), and the correction technique is considered the borderline between winning and losing, but offensive plans of various colors and basic skills become useless, unless they are culminated in the successful correction on the goal (Gerges Mounir Ibrahim, 2004, p. 112).

In spite of the efforts made in the field of sports training from numerous studies and researches that have achieved progress in the game of handball, and in view of all this, there are still problems related to the training process that requires scientific solutions that fall on the shoulders of specialists and trainers in handball, as well as the search for methods Modern scientific and means that help to raise the physical performance of players. As weight training has been

designed to achieve direct development of muscular capacity in various activities, and in order to illuminate this topic and clarify its features, we asked the following question:

✓ **Does developing explosive power using weight training affect the pivot correction technique of handball players?**

Through this question several questions emerge, including:

-Are there statistically significant differences between the experimental group and the control group in the posttest of the explosive force of the lower limbs in favor of the experimental sample?

-Are there any differences statistically significant between the experimental group and the control group in the posttest of the explosive force of the upper limbs in favor of the experimental sample?

-Are there statistically significant differences between the experimental group and the control group in the posttest of shot power in favor of the experimental control?

-Is there a statistically significant correlation between the test for impact force and the test for explosive force of the lower extremities?

-Is there a statistically significant correlation between the test for shot force and the test for the explosive force of the upper limbs?

3- Hypothesis:

3-1 General Hypotheses:

Explosive power, using weight training, contributes to the development of pivot correction technique for handball players.

3-2 Partial Hypothesis:

- There are statistically significant differences between the experimental group and the control group in the posttest of the explosive force of the lower limbs in favor of the experimental sample.

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- There are statistically significant differences between the experimental group and the control group in the posttest of the explosive force of the upper limbs in favor of the experimental sample.
- There are statistically significant differences between the experimental group and the control group in the posttest of shot power in favor of the experimental sample.
- There is a statistically significant correlation between the test for impact strength and the test for explosive strength of the lower extremities.
- There is a statistically significant correlation between the test for impact strength and the test for explosive force of the upper limbs.

4- Importance of the study:

This research comes with the aim of adding a scientific reference for the Algerian library in general, and for coaches and researchers in particular, this reference which sheds light on an important area in the training process, which allows us to know the effect of the development of explosive force by using a training program with weights on the correction technique of pivoting among handball players, Consequently, giving some solutions and drawing attention to the appropriate way to develop explosive power and the technique of aiming from the pivot, in addition to providing readers with sufficient information about weight training and its types in handball.

5-Objectives of the study:

- The detection of the effect of developing explosive power using weight training on the correction technique of pivoting of handball players.
- Knowing the differences between the experimental group and the control group in the posttest of the explosive force of the lower limbs in favor of the experimental sample.

- Knowing the differences between the experimental group and the control group in the posttest of the explosive force of the upper extremities in favor of the experimental sample.
- Knowing the differences between the experimental group and the control group in the posttest of shot power in favor of the experimental sample.

6-Concepts and terms of the study:

Weight training:

- **Idiomatically:** It is a group of exercises using weights that includes the most important working muscles that are in the same direction as the muscular work used by handball players during the match (Muhammad Reda Hafez Al-Ruby, 2007, p.145).
- **Procedurally:** By weights or resistances, we mean the effect of a particular weight or resistance on the work of certain muscle groups or the whole-body weight. There are different types of weight tools and devices that are used to develop muscle strength, and these methods include free weights (traditional and manual) and modern devices and stations.

Explosive Force:

- **Idiomatically:** It is the ability to achieve a maximum increase in strength in the shortest possible time, meaning the increase in force where the unit of time is the unit, and the explosive force depends on the speed of contraction of the motor units with fast motor fibers and the strength of contraction of the interfering muscle fibers (Ahmed Bastouessi, 2007, p 116), as stated by PREVOST (2013, p33), "it is the ability to produce the greatest possible acceleration, either by the athlete himself or by the use of a machine

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- **Procedurally:** It is the removal of the muscle the maximum possible force in the least possible time through which the handball player can perform the skill of correction and elevation he needs in the interview.

Handball:

- **Idiomatically:** Handball is one of the group sports that is practiced with the ball and it originated in the nineteenth century. It consists of seven players, including the goalkeeper, and plays with the hand. It takes a field of 40 m in length and 20 m, refereed by 2 arbiters, it lasts for 2 half time, each half lasts 30min with.10min for rest and recovery (Zarzis Mounir Ibrahim, 2008, pp. 8-9).
- **Procedurally:** It can be defined as a team sport in which two teams compete, each with seven players (6 players with a goalkeeper). Players pass the ball between them to try to throw it into the opponent's goal to score the goal. The team that can score the most goals in the opponent's goal at the end of the match is the winning team.

Skill:

- **Idiomatically:** Means those movements that are characterized by speed and accuracy of performance within the limits and rules governing that activity (Mufti Ibrahim Hammad, 1997, p. 31).
- **Procedurally:** The movement that the player must perform in all the different situations that the game requires, and this requires a voluntary movement of the body, in order for the movements to be performed properly, whether these movements are with the ball or without it.

Shooting:

- **Idiomatically:** It represents the outcome of the team's individual and collective technical and planning performance, as it represents the skill of ending the attack with all its skills and tactical behavior, and

regardless of its various types and methods of performance, it serves one purpose, which is to cross the ball with its entire circumference and the boundaries of the goal (Ahmed Youssef Mutaib, 2005, p.79).

- **Procedurally:** Correction is the conclusion of all offensive movements, and it is an essential means of scoring goals.

Training Program:

- **Idiomatically:** It means organizing a section of medium-term training that lasts for a few weeks, set in order to define the stage of severe development of a physical condition until reaching the preferred state. Sports training programs vary in their qualities and designs according to the type of beneficiaries, and the type of fields in which these programs are presented, and the training program serves, the year is the abilities, capabilities, preparations, characteristics and tendencies of the players, but on both sides of this field there are talented players with abilities and skills of good and high level (Mufti Ibrahim Hammad, 2001, pp. 68-69).
- **Procedurally:** It is the performance of a set of isometric and plyometric exercises in a standardized manner, designed by the researcher depending on foundations and rules by controlling the training load in order to develop the explosive strength characteristic of the handball player.

7. Previous and similar studies:

7.1 Arabic Studies:

The first study: Prepared by Dr. Rahim Attia Janani “**The effect of a proposed training program with weights to develop the muscular capacity of handball players in April 2010-2011**” The problematic of the study was as follows the effect of using a suggested training program using weights on developing the muscular capacity of the two men among handball players?

Where the researcher used the experimental approach on a sample of (20) players, and the conclusions he reached were the contribution of the proposed training curriculum in developing muscle strength in the research sample of the experimental group, as well as the presence of statistically significant differences between the results of the post-tests of muscle capacity.

The second study: Prepared by M. Shaima Ali Khamis, "**The explosive power of the arms and legs and their relationship to the performance of the skill of crushing volleyball for students of the second stage of the Faculty of Physical Education, University of Babylon 2005**" The problem was represented in the knowledge of the relationship between the characteristic of the explosive force of the arms and legs and the performance of the crushing skill, where the researcher used the experimental method on A sample of (20) students, and the conclusions reached that there is a positive relationship between the explosive force characteristic of the arms and the skillful performance of the crushing hit of the research sample, as well as the existence of a positive relationship between the explosive force characteristic of the two men and the skillful performance of the crushing hit of the research group.

8.2 Foreign studies:

The first study: Prepared by Factors FACTOUROS (2000) "The effect of plyometric training and weights with the plyometric on the strength of the leg muscles and the achievement of the vertical jump" The study aimed to identify the effect of both plyometric training and weight training, and plyometric training with weights on the strength of the leg muscles and the achievement of the vertical jump, where the researcher used the experimental approach using Two experimental groups, the first used weight jumping and push-ups with maximum productive ability, and the second group used weights with deep jump and medical ballistic ball exercises, and a third group controlled, and the duration of the program was (08) weeks at a rate of two units per week, and the

results of the study were that there was a parity between The two types of training used in the performance of jump, bike, throwing and weightlifting skills. **The second study:** Prepared by LaBauer, Christian, Annie Labuber, Christian, Anne (1993) **“The effect of plyometric training on some selected tests for maximum strength and explosive strength of the two legs compared to weight training.”** The study aimed at training four training programs, namely, weight training, plyometric exercises, a combination of weight training, plyometric and training for a control group on maximum strength. And strength, the research sample included (39) female students from the University of Michigan in the United States, and the results of the research resulted in significant differences in the vertical jump tests, and the multiple tiki test for the benefit of the group that used a combination of weight training and plyometric exercises, and the results showed significant differences between the pre-tests. And dimensional for all research groups for the benefit of posttests.

8-3 Criticism of previous studies:

Among the similarities that we have seen in previous studies that we have referred to in the subject of our study, we find:

- All studies used the experimental approach.
- All studies were distinguished by the selection of appropriate tests.
- Studies have agreed the positive effect of weight training on explosive strength.
- In most studies, the sample was chosen in an intentional manner.
- Most of the studies aimed to investigate the effect of a weight-training program on developing explosive power.

II. The practical chapter

1-Exploratory Study:

1.1 Objectives of the Opinion Study:

On this point, the researcher tried to present the most important objectives that can be drawn from the exploratory study:

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- Preparing and testing research tools, their characteristics and their ability to measure research variables.
- Preparing the assistant staff.
- Ensure the validity of the proposed tests.
- Knowing the average time spent in the application's research tools and knowing the best conditions for conducting the basic study.
- Practice on how to record cases in the form.
- Clarity of cases related to registration forms in terms of interpretation.

1-2 Exploratory study tools:

The exams:

The test is known as the method or method of the experimental approach in order to evaluate one or several cases, and field tests are considered one of the most important methods used in the field of physical education and sports, especially in experimental research, as it is the basis for objective evaluation and the most important and successful way to reach accurate results in the field of scientific research, and main purpose of these tests is to measure the physical aspects (such as strength, speed, endurance ...) and they give us a clear picture of the physical condition of individuals so that we can reach a stand on the physical abilities in order to assess the physical level of the individual, and these tests in the sports field allow us to know the current state of individuals until We can build training programs and plan them properly, taking into account time, effort and money, and on this basis these physical tests for the handball game were built using previous studies and the theoretical side, these tests are for measuring the explosive force of the upper limbs and lower limbs and Shot power and Which is as follows :

- Maximum repetition of the muscles of the lower extremities with squatting and bar on the shoulders.

- The maximum repeat test of the upper ends of the iron bar pressure.
- Shot strength test.

1-3 Information collection methods and used devices:

Long iron bar, Weight rack, Iron cylinders, Swedish seat., Stop Watch, The test results registration form used, 48 precision mobile phone camera MP, Implementation (Application) for Adidas as Snapshot Adidas.

1-4The pilot study sample:

The exploratory or preliminary study relied on building and testing the characteristics of the research tool on the observation card we did to conduct Observation staff training On February 12-2020, in good climatic conditions, and that was in the Institute of Physical Education and Sports, Dely Ibrahim, on a sample of (5) students active in different teams within the National Handball Championship, senior. This sample was chosen in a random, non-intentionally probable manner, where the tests were explained and recorded within an hour And after a week, the tests were repeated under the same circumstances and conditions, all of this in order to determine the reliability, validity and objectivity of the tool, which gave us results that are close to perfection and this is due to the nature of the tool, and we noticed the presence of negligible errors and minor differences, and thus there is no room for error in the observation.

2-Research Methodology:

We will try to use in our study the experimental method that is in common with other methods of scientific research in conducting experiments on phenomena, facts and study samples to ascertain the truth of the phenomenon or to prove the validity of the hypothesis or to obtain results. The experimental method is defined as "a method related to conducting an experiment to measure one of the independent variables on another dependent variable" (Inaya Ghazi, 2014, p.38).

2-1-Research Community and Sample:

Where our study community consists of the six teams participating in the national handball championship, men of the Senior category for the 2019/2020 sports season, active at the level of Algiers in central, as follows:

(Al Abyar Handball Club -EL BIER), Sports Club Bir Mourad Rais (CSB), Sports Club of Central Algeria Municipality (CRBEE), Ittihad Riyadi Baladyat of Madania (IRBM), NADIT ALGIERS, Tala'a Athlete Bab El Oued (TRBB), Etoile Handball Baladyat of Ain Taya (EHBAT).

In order to study our research, the research sample was selected from the research population consisting of eight teams in a randomized probability method (simple lottery method) where eight scraps of paper were obtained, written on each piece the name of the team, and from eight scraps were made Five scraps were selected, where four teams were selected from each team (left and right back). Therefore, a sample consisting of 20 players (left and right back) was obtained. And it was divided into two independent samples as follows:

Control group: 10 players. **An experimental group:** 10 players

Research that the experimental sample was subjected to the specific program that was built through the theoretical study, and as for the control sample, it was still being trained as a normal without subjecting it to the program.

2-2-Statistical tools:

The student researcher has made use of the statistics program (IBM STATISTIQUE 19 SPSS).

2-3-Research areas:

The human field: The players of the five teams selected for the first division have a middle.

2-4-Adjust study variables:

Independent variable: It is the variable that affects the occurrence of a particular situation. If we want, for example, to study the effect of an increase in

the number of cars in the country on accidents, then the increase in the number of cars is the independent variable, and the number of accidents is the subordinate, and in our research, this is represented in the "effect of developing explosive force by using weight training on technology Shooting from the pivot for handball players, "the independent variable is" explosive power "(Jafari Nasima Rabia, 2006, p. 80).

Dependent variable: It is the variable that occurs as a result of the effect of the independent variable, or it is what follows in the occurrence of the independent variable, and the dependent factor is called the resultant factor. Thus, the dependent variable in our study is the "pivot correction technique" (Jaafari Nasima Rabia, 2006, p.81).

III. -View analysis and discussion of results:

In terms of answering the questions asked:

The student researcher in this axis will explain the methods that he used to answer the questions raised in this research to identify a number of facts, through the main points, which are as follows:

-The first question consists of: **The differences that can be deduced from the experimental group and the control group in the pre and posttests of the explosive force of the lower limbs in favor of the experimental sample?**

To answer this question, the researcher student used the descriptive statistics for the results of tests of the explosive strength of the lower limbs, using the a to repeat the maximum squat and the bar on the shoulders on The experimental sample and the control sample for each of the pre and posttests separately on the players of the first national section in the middle of handball, the senior category, then resorted to find out the differences between these tests to the inferential statistics through which it is possible to know what they aim for the student researcher, and thus he studied a test and comparison between The pre

Differences between Pre and post tests for each sample descriptive study INTRA-GROUPE																
	The lower limbs						Upper limbs						Shot power			
	Control group		Experimental group		Control group		Experimental group		Control group		Experimental group		Control group		Experimental group	
	Pre-test	Test	Pre-test	Test	Pre-test	Test	Pre-test	Test	Pre-test	Test	Pre-test	Test	Pre-test	Test	Pre-test	Test
Repetition	891	903	852	1085	855	860	800	936	1007	1020	914	1134				
percentage	49,66	50,33	43,98	56,01	49,85	50,14	46,08	53,92	49,68	50,32	44,63	55,37				
SMA	89,1	90,3	85,2	108,5	85,5	86	80	93,6	100,7	102	91,4	113,4				
standard deviation	5,82	6,237	5,846	8,236	6,078	6,018	4,595	3,658	9,105	9,297	9,324	7,72				
The standard deviation error	1,841	1,972	1,849	2,604	1,922	1,903	1,453	1,157	2,879	2,94	2,948	2,441				
The level of significance between the two tests	0,662		1,796		0,855		1,19		0,755		2,369					
Calculated T	0,445		7,925		0,185		7,323		0,315		5,747					
Differences between a sample Control and experimental Tribal and dimensional tests an inferential study INTER-GROUPE																
	The lower limbs						Upper limbs						Shot power			
	Pre-test		Post test		Pre-test		Post test		Pre-test		Post test		Pre-test		Post test	
	Control	Experimental	Control	Experimental	Control	Experimental	Control	Experimental	Control	Experimental	Control	Experimental	Control	Experimental	Control	Experimental
Repetition	891	852	903	1085	855	800	860	936	1007	1020	1143					
percentage	12,51	88,48	42,47	58,54	51,66	48,34	47,88	52,12	914	47,58	47,35	52,65				
SMA	89,1	85,2	90,3	108,5	85,5	80	86	93,7	100,7	91,4	102	113,4				
standard deviation	5,82	5,846	6,237	8,236	6,078	4,595	6,018	3,658	9,105	9,324	9,297	7,72				
The standard deviation error	1,84	1,848	1,972	2,604	1,922	1,453	1,9	1,157	2,879	2,948	2,94	2,44				
The level of significance between the two tests	0,152		0,000		0,036		0,004		0,037		0,088					
Calculated T	1,495	1,734	5,571-	1,734	2,283	1,734	3,413-	1,734	2,257	1,734	2,983-	1,734				

and post-tests, which resulted in the existence of statistically significant differences in the explosive force tests on the experimental sample and the control sample between the tribal and dimensional tests in favor of the post tests, and the answer to this question suggests the effectiveness of using the weight training program in developing the explosive force of the lower limbs.

-As for the second question that is being studied: **the differences that can be deduced from the experimental group and the control group in the pre and posttests of the explosive force of the upper limbs in favor of the experimental sample?**

To answer this question, the researcher student used the descriptive statistics for the results of the tests of the explosive strength of the upper limbs, using the test To repeat the maximum by pressing the iron bar on The experimental sample and the control sample for each of the pre and post-tests separately on the players of the first national section in the middle of handball, the senior category, then resorted to find out the differences between these tests to the inferential statistics through which it is possible to know what they aim for the student researcher, and thus he studied a test and compared The pre- and post-tests, which resulted in the existence of statistically significant differences in the explosive force tests on the experimental sample and the control sample between the tribal and dimensional tests in favor of the post tests, and the answer to this question suggests the effectiveness of using the weight training program in developing the explosive force of the upper limbs.

-The third question that studies: **The differences that can be drawn between the experimental group and the control group in the pre and posttests of shot power in favor of the experimental sample?**

To answer this question, the student researcher used the descriptive statistics for the results of the shot strength test by using a test Paying from leaning on The experimental sample and the control sample for each of the pre and posttests

separately on the players of the first national department in the middle of handball, the senior category of Senior, then resorted to find out the differences between these tests to the inferential statistics through which it is possible to know what they aim at the student researcher, and thus he studied a test and comparison between The pre and post-tests, which resulted in the presence of statistically significant differences in the test of shot strength on the experimental sample and the control sample between the tribal and post-tests in favor of the post tests, and the answer to this question indicates the effectiveness of using the weight training program in developing shot power?

- The fourth question studies: **the correlational relationship between the test of the shot strength and the test of the explosive force of the upper limbs?**

The student researcher calculated to reveal the existence of a correlation between the shot force test and the explosive force test of the upper limbs among the experimental sample players and the control sample, as the statistical analysis proved the existence of a significant correlation between the shot force test and the explosive force test and a test, but it remains in its entirety in what the student predicted the researcher in terms of hypotheses.

The student researcher to answer this question calculated the correlation using the statistical processor (SPSS) at the significance level (0.05) , to find out whether there is a correlation between the test of shot force and the test of the explosive strength of the parties. The maximum repetition of the muscles of the upper extremities by pressing the iron bar, As the statistical analysis proved the existence of a significant direct correlation ranging between the strong and the average between each of the test of shot strength and the test of explosive force characteristic, but it remains in the entirety of what is predicted by the researcher in terms of hypotheses.

-The fifth question studies: **the correlational relationship between the test of the shot strength and the test of the explosive force of the upper limbs?**

The student researcher calculated to reveal the existence of a correlation between the shot force test and the explosive force test of the upper limbs among the experimental sample players and the control sample, as the statistical analysis proved the existence of a significant correlation between the shot force test and the explosive force test and a test, but it remains in its entirety in what the student predicted the researcher in terms of hypotheses.

The student researcher to answer this question calculated the correlation Using the statistical processor (SPSS) at the significance level (0.05), to find out whether there is a correlation between the shot force test and the upper limb explosive strength test: The maximum repetition of the muscles of the upper extremities by pressing the iron bar, As the statistical analysis proved the existence of a significant direct correlation ranging between the strong and the average between each of the test of shot strength and the test of explosive force characteristic, but it remains in the entirety of what is predicted by the researcher in terms of hypotheses.

IV. Conclusion

The Object of the study aims to **identify Developing explosive power by using weight training on correction technique from pivoting of handball players**, for this purpose, we used the experimental sample and the control sample in the first national department have a center handball class of senior, and this study was based on a basic hypothesis and came as follows:

Explosive power, using weight training, contributes to the development of pivot correction technique for handball players.

After the researcher conducted the applied field aspect in which he used explosive strength tests for the lower and upper extremities, it was applied to the experimental sample and the control sample in the first national section of handball. The largest problem was classified for our research sample. It was found that there are differences between the pre-tests (before implementing the

program) and the post-tests (after the implementation of the program), and after analyzing and discussing the results of this study, the explosive force was reached. by using weight training, you contribute to the development of the correction technique of pivoting for handball players.

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