

The effect of using rehabilitative exercises for people with ankle joint sprain on the effectiveness of triple jump for the second stage students

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Abstract

Most sports activities start and depend on the movements and placement of the joint (ankle) and the effectiveness of the triple jump and one of the games because it requires speed and strength in one that, as a result of this, the player is subject to many common injuries, especially the sprain of the ankle joint. Here lies the importance of research in focusing on Qualifying exercises chosen by the researcher, as they contribute to returning the player to his normal state before the injury, to avoid injury again. The ankle joint works in two directions by connecting it to the lower leg with the foot, it is firstly a suspended joint that allows simple movement up and down and secondly it allows the movements of the flexion and rotation to edge on the sides and the ankle consists of the end of the shin bone ((below it)) and the end of the splinter bone and is connected to each other strongly by the ligament Fragmental heel, which connects to the ankle bone and the nearby surfaces are smooth and in the form of an arc (arch), so the rounded surface of the ankle bone can slide gently to allow the foot to move up and down, and the joint is all surrounded by a capsule and tight straps in all directions It is supported in particular by the internal and external sides, where the internal ligament and the external ligament are multiplied in succession . The researchers conducted the tribal tests and applied the exercises of the water resistors, then the dimensional tests were conducted and the results of the research were in favor of the post tests, due to the effect of the exercises that were used on the research sample.

Key words: Pain injury, rehabilitation, ankle joint injury, triple dart

Introduction

Most of the sporting activities start and depend on the vital joints in the body, where the ankle is one of these important joints for the majority of sports movements to depend on it, as it is considered the support for the correct body position. Sports injury is one of the main problems facing the player, as it is considered a major obstacle to its progress and development of its level, which affects its performance directly, as many Arab and foreign sources dealt with the concept of sports injury if some of them are prepared until the body needs a balance and compatibility in work between all its different organs.(**Mervat, 1996**) (The nervous, muscular, skeletal, and respiratory system) as well as other devices that need movement and integrated activity because of this affirmation of the body's activity and

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protection from injury and diseases and injury or disease occurs. The science that studies injury and diseases is called in the event of this imbalance that occurs in the athletic field and its causes, treatment and methods Prevention with sports injury science.(**Auditory, 2010**)

Literature review

The ankle joint works in two directions by connecting it to the lower leg with the foot, it is firstly a suspended joint that allows simple movement up and down and secondly it allows the movements of the flexion and rotation to edge on the sides and the ankle consists of the end of the shin bone ((below it)) and the end of the splinter bone and is connected to each other strongly by the ligament Fragmental heel, which connects to the ankle bone and the nearby surfaces are smooth and in the form of an arc (arch), so the rounded surface of the ankle bone can slide gently to allow the foot to move up and down, and the joint is all surrounded by a capsule and tight straps in all directions It is supported in particular by the internal and external sides, where the inner ligament and the external ligament are multiplied in succession(**.Riad, 1999**)Therefore, any injury to the ankle is an injury to all its structural structure and damage to the ankle joint occurs as a result of violent exhaustion from difficult movements that are not tolerated by its ligaments and bone levers. (**Hassan, 2013**)When it occurs to the ankle, damage is caused by Malakh in one of its ligaments. Below the leg, the delicate tissue fuses, and lymphatic blood vessels may damage. Bleeding occurs, and blood around the tissues, cavities, and around the ankle occurs .The ankle joint is one of the most complex joints of the body and consists of a group of bones, tendons and ligaments that are subject to the control of a group of muscles, which is the most common representing 85% of the total joint injuries and often the injury is tearing or stretching in the ligaments of the ankle joint and the injury occurs as a result of movements in the lower body Which does not match the amount of pressure on this area, and ankle injury is often caused by violent sports that require lateral movements, such as in tennis and basketball, or as a result of other sports such as walking and exposed to non-athletic and low-mobility people, due to the ankle ligament losing its strength and its ability to stretch in the course of movement (**Hamid, 2014**) So sports medicine is considered one of the methods and rehabilitation of injuries from the important sciences and basic aspects in all sports, as the contribution to the prevention of sports injuries and the reduction of injuries to players and their rehabilitation represents one of the goals of importance in the sports field as the qualifying curricula are sufficient to keep the player as far as possible from the possibility He was injured again as a result of practicing sports activities and games as the interest in rehabilitating the injured players aims to bring them back as soon as possible to participate with their teams in training and competitions through rehabilitation using rehabilitative exercises and scientific methods (**Bassam, 1996**) The triple dart is one of these important sports that requires speed and strength at the same time, and the triple dart injuries are many and the most common is an injury to the ankle joint sprain because this joint has a great responsibility in carrying body weight as well as the movement of the movement from the feet to the upper extremities and controlling the force required for performance Mobility, stability, jumping and body lift, which includes a great obstacle to the player's return and participation in competitions. Therefore, the introduction to the research focused on qualifying exercises for those with sprain of the ankle joint in the second stage students and working to remove and alleviate the pain of injury through the use of safe and effective rehabilitative exercises studied on scientific basis for the fact that these Exercises help treat people with ankle joint sprain, reduce negative effects from injury, and work to eliminate these effects by giving exercises to strengthen the joint to return to their normal lives without resorting to drugs and analgesics, and thus obtaining the desired benefits from the research (**Abdel-Azim, 2004**)Since the triple jump of complex activities, which consists of several steps and requires muscular nervous compatibility and high physical fitness in addition to the correct technique and being an activity that contains all these difficulties, (**Sumaiya, 1990**) students are exposed to several injuries during practical lessons due to the weakness of this joint or repeated injuries as well as weak physical fitness, By reviewing the

researcher on previous research and studies in the field of rehabilitation of ankle joint sprain injury and after research and medical examination and the role of the supervising lady in the search for players with ankle joint sprain for students of the second stage as a result of their performance of the effectiveness of triple jump and some of them have repeated injury and subject them to the possibility of a final move away from Nash Atham athlete. Therefore, the researchers decided to find the best means and exercises to rehabilitate them and return to their normal life before the injury through the use of rehabilitative exercises for those with sprained ankle joint in the effectiveness of triple jump (Mohamed, 2004)

Methodology

1. **Procedures:** The researcher adopted Wen research methodology fits with the demo being a solution to the problem to be researched and selected researchers research sample (purposively) They are a group of students from the second stage / College of Physical Education - University of Baghdad (2018-2019) injured ankle joint sprain, through the medical examination And personal interviews where the number of injured (10) students. The researcher Wen a number of devices and tools for them to find where these devices is one of the requirements of the procedure as well as tests for the use of the collection of information for research , such as Arab sources and electronic information also sports injury results vary According to the type and severity of the injury, (Thamer, 1978) it is determined by the specialist doctor, as it determines the degree of injury if it is simple, medium or severe, and medical treatment is set for it, and the first and important stage is for the injured and then the stage of entering the rehabilitation exercises, and this depends on the extent of the injury healing and the possibility of moving the affected organ to do these exercises The researcher looked at a group of Arab sources that dealt with the subject of ankle sprain injury, so the search tests were : jumping from a stability test. Running test with distance (30 meters). Two-leg test and stability. Step and dash test of stability. Jump test Height (40 cm) Time (30 seconds) Sprint. The test of measuring the strength of the muscles of the two men by a dynamometer , then the tribal tests were conducted on Monday and the coincidence (18/2/2019) at exactly eleven o'clock in the stadium of the square and the field College of Physical Education - University of Baghdad has been taking into account stabilization of all conditions related to the tests from Where the tools, time and place, as well as the method of implementation, to provide the same conditions in the post-test as much as possible. The experiment exercises were applied as follows. The researcher prepared special rehabilitative exercises in which he determined the following: After completing the acute condition accompanying the pain, the rehabilitation curriculum begins. Exercise starts on Monday (25/2/2019). Physical exercises and exercises in the aqueous environment at the Specialized Center for Physiotherapy and Rehabilitation the College of Swimming Pool at exactly (ten in the morning) at the College of Physical Education. The duration of the qualifying exercises is 8 weeks. The numbers of rehabilitative units per week (2). Units of days (Monday-Tuesday) .add units total qualifying (16) unit (Unity qualifying total time (25 d -35 d). he completion of the application of rehabilitation exercises on Tuesday, a brief summary (04.16.2019.) Was conducted Post-tests on (Thursday) and (18/4/2019) and at exactly (ten in the morning) at the College of Physical Education, and using the statistical bag using a system spss.(Sumaiya, 1990)

Results

1. **Present the test results for the pre and post experimental group of physical tests, analyze and discuss them:**

For the purpose of verifying the research hypothesis, the researcher analyzed the special research data (with physical tests) to determine the tribal and dimensional differences using the (T) test for the associated samples and the results were as shown in Table No. (1).

Table No. (1)

Shows the results of the arithmetic mean, standard deviations, mean differences, their deviations, the calculated value (T) and the moral significance of the experimental group. The pre and posttests in the physical tests.

Skills	measuring unit	Pre-test		Post-test		F.	P p	Values (t)	Error level	Indication of differences
He ran (30) m	Time	5.3850	0.30917	4.0960	0.06552	1.28900	0.29195	13.962	00	oral
Jump from constancy	The meter	1.2300	0.17192	2.9450	0.09560	1.71500	0.14347	37.801	00	oral
Step and leap from steadiness	The meter	2.2500	0.10801	4.4350	0.38877	2.18500	0.45034	15.343	00	oral

2. Presentation, analysis and discussion of the results of the triple jump test for the pre and post experimental group:

Table No. (2) Shows the results of the arithmetic mean and the standard deviations between the pre and posttests, the difference between the arithmetic mean, its standard deviation, the calculated value (T) and the significance of the differences between the results of the triple jump test for the experimental group.

Skills	measuring unit	Pre-test		Post-test		F.	P p	Value s (t)	Error level	Indication of differences
Two-legged standof f	The meter	3.4700	0.35917	6.8780	0.41840	3.40800-	0.44344	24.303	00	oral
Jump on the									00	oral

mastaba										
(30) seconds	Time	14.3000	2.1108	33.2000	2.8205	18.90000	3.3483	17.8500	00	oral

Conclusions

1. From the tables (1) (2), the statistical significance of the physical tests and the triple jump are all indicative between the pre and posttests of the research sample, and the researcher attributes the appearance of the result to the improvement in the result in the mechanism of muscular work, and this means the effectiveness of the rehabilitation and physical exercises that were chosen in a way appropriate with the injury Through the medical examination and the doctor's diagnosis according to the X-ray and the opinion of experts and sources and studies by choosing the appropriate exercises and the researcher attributes the benefit of inserting the aqueous medium as one of the therapeutic and rehabilitation exercises that had an effective role in developing and improving the ratio of results and also improving the motor performance, where you see (the life of Raphael (that the exercises Rehabilitation or therapeutic is a group of physical exercises intended to correct deviation from the normal state or treat an injury that leads to the organ's obstruction from carrying out its full function and help it to return to the normal or near state and this requires from sports medicine and physical therapists and trainers familiar with the therapeutic sport to restore Rehabilitation of the injured part in accordance with the principles of rehabilitation of sports injuries.
2. The therapeutic exercises contribute to increasing the walking distance, any movement, and physical therapy has a major role in the treatment and rehabilitation of injuries, and therefore the ways in which it is treated are different.
3. The chosen therapeutic exercises commensurate with the nature of the injury and the gradient based on scientific grounds to increase the severity and repetition of these exercises, which are important correlation with the age of the player and the injury method called the injury mechanism and also the first aid which is a natural field the first step to rehabilitate the injury
4. Rehabilitation is a treatment and training for the injured person to restore functional ability in the shortest possible time by using physical therapy methods that are commensurate with the type and severity of the injury, as the design of rehabilitation programs is relatively simple and includes three short-term goals) :pain control - maintaining flexibility and improving it - The return or increase of strength (especially the importance of inserting the aqueous medium into therapeutic exercises, where (Thamer Saeed) explains that" training in the patient's water is an opportunity to perform movements in an environment that is not only to work on the body's deluge but also a factor that helps allow movement with minimal effort even if it is That part is weak, so he can move and exercise in a way that cannot be done without help in an environment other than water, in addition to that, performing a group of activities, exercises and games in a deep swimming pool has a great benefit to the patient's morale. Easy for the patient.
5. On the other hand, on hydrotherapy, it is considered one of the most important ancient treatment methods that people still use so far and uses water for treatment, either internally by drinking or externally by diving into the water and doing some exercises. The specialists said that water aerobics is one of the most effective types of sports in relieving joint pain resulting from infections, restoration of activity and movement of the affected body areas, indicating that water is the best way to places where arthritis patients can exercise.

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