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## The effect of therapeutic sports exercises to rehabilitate wrestling players injured in the elbow joint

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### Abstract

The current study aimed to identify the effectiveness of therapeutic sports exercises to rehabilitate wrestling players injured in the shoulder joint. In this study, the researcher used the one-group experimental approach Using two measurements taken before and after to fit the needs of the study and its sample. The research sample represented wrestling players injured in the elbow joint, and their number reached (4). injured players, and after applying therapeutic sports exercises to the study sample throughout a six-week period, in three educational units in the physical therapy center at Al-Khalis General Hospital (Sunday, Tuesday, Thursday) and under the supervision and follow-up of the specialist doctor, the results showed by applying the exercises to the presence of statistically significant variations favoring the post-measurement between the research sample's pre- and post-measurements. The most important conclusions were: the effectiveness of therapeutic sports exercises in rehabilitating players with elbow joint injuries in wrestling, and the most important recommendations are the necessity of using therapeutic sports exercises in physical therapy centers to prove their effectiveness in rehabilitation.

**Keywords:** Therapeutic sports exercises, elbow joint

### Introduction

Although medicine has developed at a very high level, the use of therapeutic exercises remains to keep pace with this development, as these exercises are considered one of the primary method of physical treatment for wounded athletes or non-players, and among these exercises are therapeutic sports exercises, a treatment that goes back a long time and has a close relationship with the development of medicine, and sports are known. Therapeutic treatment, From Saleh Bashir's perspective, "is a chosen group of exercises" intended to correct a deviation from the normal state or treat an injury that leads to the body being unable to perform the full function of an organ, with the aim of helping it return to its normal state so that it can perform its full function. I knew it (Samia Khalil Muhammad: 1999) <sup>[2]</sup>. "Specific sports movements for various medical conditions with a preventive and therapeutic purpose." This is by returning the body to its natural state. Through rehabilitative exercises and exposing the injury site to external influences, which lead to anatomical and physiological changes, it has been agreed among many experts inside the realm of sports, the quantity of sports injuries is quite small, and one of the causes of sports injuries is poor warm-up. Or sufficient and high effort in performance to reach the highest levels. "The rate of injuries in stadiums has increased despite the safety measures that have improved the situation," note Osama Riyad and Imam Al-Hussein. Stadium mishaps continue to pose a direct hazard to athletes in most sports. Physical fitness is considered one of the elements." The basic principles that build a healthy body, and that exercising brings many benefits, such as mental clarity, agility of movement, coordination of the entire body in general, and most important of all, balanced and natural physical health, where the use of therapeutic methods to rehabilitate the body's organs has begun, and these methods are safe for the individual's life and have a positive effect and avoid Unnatural methods that have side effects. Therefore, research is crucial in efforts to find methods to relieve or eliminate pain away from medical drugs that only work to relieve pain and have a negative impact on humans.

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Therefore, therapeutic sports exercises were prepared, whose role is to rehabilitate players or injured people.

### Research problem

From the researcher's knowledge of many of the wrestling's illnesses and the injuries that occur during matches or training, his being a teacher at the Heritage College for wrestling, his being close to the wrestling players, and his knowledge of the players afflicted with the elbow joint, this problem crystallized in the researcher's mind and solutions must be found for it, and after reviewing many From previous research and studies and taking the opinions of specialists in this field, to preparing therapeutic sports exercises to rehabilitate players injured in the elbow joint, because The majority of wounded patients see doctors in order to receive treatment for their injuries., and this is not enough. There must be physical therapy exercises that are prepared according to scientific foundations and are graded. From easy to difficult, it makes it an effective way to rehabilitate injured people.

After all that was mentioned, the researcher decided to prepare therapeutic sports exercises as an effort to rehabilitate wrestling players with elbow joint injuries, as a contribution to the players' return to playing the game and entering competitions.

### Research objectives

- Preparing therapeutic sports exercises to rehabilitate wrestling players with elbow joint injuries.

- Identifying the effect of therapeutic sports exercises in rehabilitating wrestling players with elbow joint injuries.

### Research hypothesis

- The post-test for the experimental group shows statistically significant changes from the pre- and post-tests.

### Research field

**Human field:** Young wrestling players injured in the elbow joint.

**Spatial field:** The rehabilitation center in Al-Khalis Hospital.

**Time field:** (15/1/2024) to (5/3/2024).

### Methodologies for research and field operations

#### Research methodology

The experimental approach, which is described as "the deliberate and controlled change of the specific conditions of a particular incident, and then observing the resulting changes in this same incident," was employed by the researcher to address his problem as well as interpreting them" (Amer Ibrahim Qandilji: 2012), by designing a single group (experimental) with appropriateness tests conducted before and after. The type of study and its objectives: The group is pre-tested to identify the variables or skills they possess under study, then the method that includes the independent variable is applied to them, then a post-test is applied to compare and draw conclusions.

**Table 1:** Displays the research's experimental design

Group	First step	Second step	Third step	Fourth step
Experimental group	Pre-test	Therapeutic exercises	Post-test	The difference between the pre- and post-tests for the group

### Both the community and the study sample

Wrestling players were among the research population's representatives. With various injuries, who numbered (7) players in Diyala Governorate. As for the sample, they were players with joint (elbow) injuries. The type of damage was identified by doing a medical examination and diagnosis. After selection, the research sample consisted of four participants who were selected. In an intentional manner.

### Tools, equipment, and techniques employed in the study

#### Techniques for gathering data

- Arabic and international references and sources.
- Individual interviews.
- Measurements and tests.
- Particular forms for players to report their test findings on.

#### Instruments and apparatus utilized

- Laptop electronic calculator (1).
- Type II electronic stopwatch.
- Twelve plastic signs.
- Sticky tape.
- Test result recording forms.
- A goniometer.

### Research field procedures

**Tests conducted:** Initially, an elbow joint flexibility test will be conducted.

Measuring the elbow joint's range of motion is the test's objective.

**Instruments utilized:** A goniometer for assessing the flexibility of joints

**Methods:** The lab first stands up, then bends its right or left arm as much as it can, placing the goniometer's arm on the forearm and its upper arm, respectively.

Instructions for the test: The tester needs to bend their elbow as much as they can.

The finest of the two attempts made by the laboratory is captured on camera.

Degree computation: After determining which of the two readings is the best, the angle that shows on the goniometer is read.

#### Investigative encounter

After ensuring the validity of the test used and preparing the therapeutic sports exercises, it was necessary to confirm via carrying out the exploratory experiment, their appropriateness for the study sample. On Monday, the researcher made the decision to carry out the exploratory experiment. 18/1/2024, and its purpose is:

- Being aware of how well the tests fit the study sample and how long they take to complete.
- Verify that the testing facilities and equipment are legitimate and appropriate.

**Pre-tests**

After ensuring that the tests were appropriate for the research sample, the pre-test was conducted on Thursday, January 18, 2024, precisely at nine in the morning, at the Al-Khalis Hospital physical therapy facility. The pre-tests, which were approved by the experts and specialists, were carried out in accordance with all test-related conditions, including those pertaining to instruments, gadgets, locations, timing, and methods of execution.

**Main experience**

If therapeutic sports exercises were applied to the research sample, the application of the rehabilitation units for the study commenced on Sunday, January 21, 2024. The rehabilitation units were applied at a rate of three (Sunday, Tuesday, and Thursday) for a period of six weeks, or until the number of rehabilitation units reached eighteen. Unit, there were a variety of exercises employed. While the exercises in the first and second weeks did not involve any resistance, the exercises in the third, fourth, and fifth weeks included exercises using small medical balls as well as using rubber ropes inside the water for purposes. The curriculum was graduated according to capabilities, and some of the exercises were static. The progression was from easy to difficult.

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**Research methods**

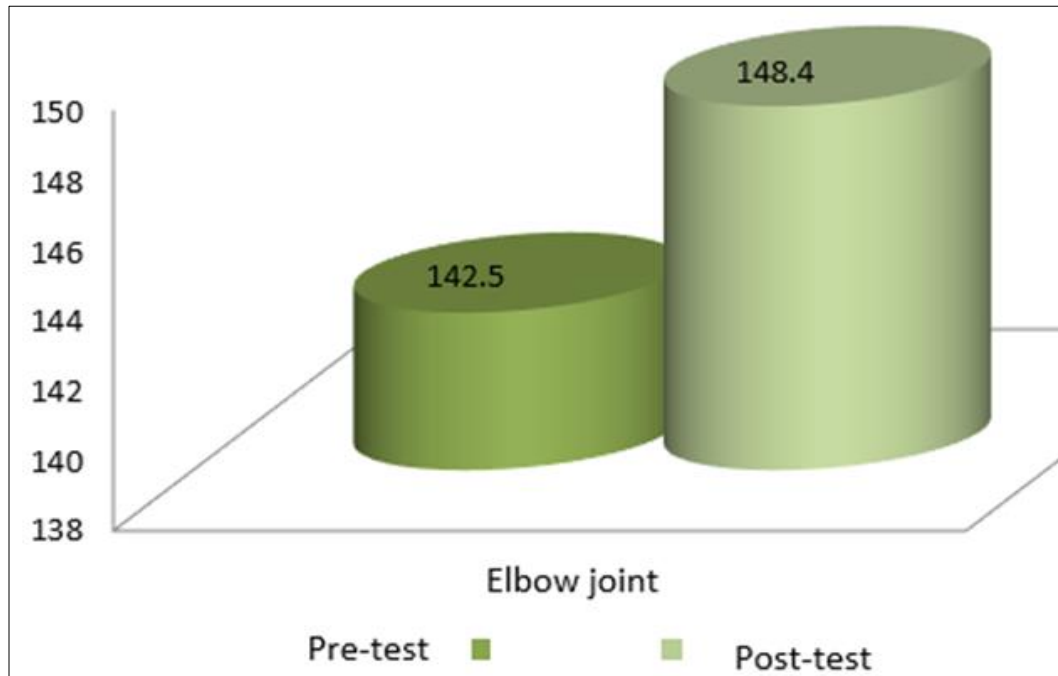
Utilizing statistical analysis (SPSS), the researcher processed and extracted the data.

Discussing the results of the study.

Presentation and discussion of the study's findings with reference to the variables looked into:

**For the variables under investigation, Table (2) displays the arithmetic means, standard deviations, T-value computed for the correlated samples, test significance level, and significance of the difference between the pre- and post-tests for the control group**

Variables		Pre-test		Post-test		T value	Level sig	Type sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard			
Elbow joint test (score)	Bend	142.5	1.421	148.4	1.115	6.055	0.000	Sig
	Expansion	164.2	1.232	170.3	1.088	7.665	0.000	Sig



**Fig 1:** Shows the pre- and post-test findings

Table (2) demonstrates the existence of statistically significant differences favoring the post-measurement in the pre- and post-tests of the elbow joint with movement (flexion, extension). This is explained, according to the study, by the fact that she employed strength training and therapeutic sports movements like stretches for the arm joints. Stretching exercises have been shown to have a

positive impact on the development of the range of motion in the arm joints used by injured players (Sari Ahmed Hamdan and Norma Abdel Razzaq, 2001) [1]. These exercises increase the range of motion in the joints that the player needs to perform the necessary movements.

Additionally, the researcher credits the effectiveness of the therapeutic sports exercises he created using the components

of strength and flexibility for the emergence of significant differences. These exercises positively affected the joint's flexibility, as measured by testing range of motion. Stretching exercises designed for this goal help to increase flexibility. These exercises are easy to grade and come in a variety of forms. From the challenging to the successful, and these exercises improved the range of motion and the study variables overall, particularly when the discomfort associated with an elbow joint injury directly impacts mobility.

Which results in the muscles surrounding the joint becoming weaker and affecting its range of motion (Youssef confirmed this). Mervat Al-Sayyid Youssef (1997) noted that water exercises give the muscles the ability to elasticize. Joints require continuous movement over a wide range in order to maintain their range of motion appropriately. Ibrahim Hammad, the Mufti, 2010.

## **Conclusions and suggestions**

### **Conclusions**

1. The effectiveness of using therapeutic exercises and their effects in rehabilitating the elbow joint for injured wrestling players.
2. The gradation from easy to difficult in applying the exercises and taking into account the intensity of pain as well as the intensity used for the research sample was appropriate to the extent of the injury and effective during the application of the rehabilitative units.

### **Suggestions**

1. Using different rehabilitation activities that the researcher has designed at physical therapy facilities.
2. Creating and approving brochures within physical therapy clinics for various rehabilitation curricula and injuries.

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