



## THE EFFECT OF ACTIVE WARM -UP EXERCISES ON FLEXIBILITY AND ACHIEVEMENT AMONG EFFECTIVENESS HIGH JUMP PLAYERS

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<b>Received</b> 17 <sup>th</sup> August 2022 <b>Accepted:</b> 17 <sup>th</sup> September 2022 <b>Published:</b> 23 <sup>rd</sup> October 2022	Flexibility is one of the elements of fitness that contributes to others, such as strength, speed, and endurance in building and developing the motor performance of the player. Also, mathematical forms need this important element. And the athlete, which has good flexibility, will help him to use the rest of the other fitness elements with a little effort and a short time to improve the achievement and its development. Also, the weak flexibility in the player leads to a weak level of sports achievement. Exaggeration in the flexibility of the joints leads to its relaxation and sometimes it reaches the state of infection, and exaggeration in it affects a harmful effect on strength. So it is necessary to pay attention when training to develop it. It is considered an important basic element among the jumping in the effectiveness of high jumping, as the player must have the flexibility of all joints in order to be able to reach a good result as well as active specialized warmth. The researchers used the experimental curriculum to suit the nature of the research. The research sample was from Al -Qurna Sports Club for Higher Jump in Basra Governorate. The tests for flexibility and achievement were applied to the high jump. Tribal tests and post -tests for the research sample, extracting results and processing them statistically, were the most important recommendations: -The necessity of paying attention to flexibility in choosing the appropriate exercises in the training curricula in jumping activities, especially high jumping in the atmosphere to achieve good achievement. The necessity of paying attention to the varied active and corresponding warm -up with the nature of the performance

**Keywords:** Active warm up, flexibility, high jump.

### 1 - DEFINITION OF RESEARCH:

#### 1-1 Introduction Research And Importance:

Modern training is interconnected with other mathematical sciences in order to be an important, essential and assistant factor "to achieve the best results and achievements in the activities and activities of athletics in general and the effectiveness of high jumping in particular, and accordingly, following the scientific methods programmed in sports training is one of the important indicators that reflects the progress of the level Performance and achievement in athletics athletes. The element of flexibility is one of the very important elements in all games, as it depends on the performance of the player, especially in the activities of jumping and gymnastics in particular, as it is one of the activities that require special flexibility in the shoulders, neck and trunk because any deficiency in these joints leads to a low level The motor performance and the influence on the achievement, and here lies the importance of research in organizing and preparing a training approach for flexibility by the active warmth of the jumping in the effectiveness of high jumping with the aim of developing the characteristic of flexibility and achievement

#### 1-2 Research problem:

Through the researchers follow -up to the competitions and training of athletics in particular and the effectiveness of high jumping in particular, as they are coaches, players and teachers who are academics in athletics activities, they noticed that there are important factors that affect the success of the performance, including active warm -up exercises

mainly affecting the full flexibility of the jumping and through experience and knowledge of The sources indicate that the most important basic requirements for technical performance in high jumping are the characteristic of flexibility, especially for the joints of the upper limbs and the trunk that enables the jumping to change the direction of the body during the movement of crossing the crossbar, which greatly affects the level Flexibility through active warm up and some proposed exercises.

### **1-3 Research objectives:**

1- Preparation training approach to developing the characteristic of flexibility for the players of effectiveness high jump for youth.

2- Learn about the effect of active warm-up exercises on the development of the characteristic of flexibility among the players of effectiveness high jumping for youth.

### **1-4 Research hypotheses:**

1- There are moral differences in the level of performance when the level of flexibility develops among the players effectiveness of high jump.

### **1-5 Research fields:**

1-5-1 human field: The players of effectiveness high jumping at the Qurna Sports Club.

1-5-2 time field: for the period from 12/6/2022 to 9/28/2022

1-5-3 spatial fields: the track and stadiums of the Qurna Sports Club.

## **2- THEORETICAL STUDIES:**

### **2-1 Flexibility its concept and sections:**

Flexibility is one of the physical capabilities that depends on achieving high levels in various sports activities. Flexibility is related to other physical abilities and has a distinguished role in technical and planning performance, so the higher the degree of flexibility, the more positively this is on the level of performance and then the level of sports results .It is known as "the ability to make different movements of the body's joints easily and the ability to prolong its muscles and link it to a wide range" (Muhammad Hassan Allawi & Muhammad Nasr al -Din: 2000) and the need for flexibility appears according to the requirements of the movements performed in various sports activities, as it contributes to the economy with the effort made at Performing any physical or motor activity, as it contributes to expressing the extent of the movements of the body joints. The level of motor performance of the athlete in various activities depends greatly on the flexibility that surrounds the joint or the possibility of prolonging the muscle fibers and is called muscle flexibility (Bastwaisi Ahmed: 1999). The researchers believe that it is an adjective Flexibility is very important in jumping activities and depends on good achievement.

It is mentioned that flexibility can be divided into: (Abdullah Hussein: 2004)

1- Positive flexibility: It is intended to reach the extent of a great movement in the joint as a result of the activity of certain muscle groups in which the joint is associated with.

2- Negative flexibility: It is the maximum extent of movement due to the influence of external powers.

Also divided into Hara to (Kamal Abdel Hamid & Mohamed Sobhi: 1997):

1- General flexibility: It includes the flexibility of the body joints.

2- Special flexibility: The joints involved in the movement concerned.

1- It gives aesthetic and smoothness in performance.

2- It leads to the economy in technical performance (technique).

3- Helps reduce injuries.

4- High flexibility leads to nervous muscle compatibility between muscle fibers inside the muscle.

There are foundations that must be taken into account to ensure the good use of flexibility exercises, including (Muhammad Subhi Hassanein: 1987)

1- The preparatory part of each training unit should contain some flexibility exercises, and there is a diversity and change in these exercises.

2- The player must perform the warm-up process before performing flexibility exercises in order to avoid injuries.

3- In the event that the player feels tired and exhausted, you must be careful with an attempt to work to develop flexibility after endurance or at the end of the training unit.

4- Special flexibility exercises should take the distinctive shape of the motor skills of the player.

5- There must be a proportion between the flexibility exercises and the level of the player.

## **3-RESEARCH APPROACH AND FIELD PROCEDURES:**

### **3-1 Research Approach:**

The nature of the problem to be studied determines the methodology of the research, "The curriculum is the way the individual pursues until it reaches a specific goal" (Ikhlas Abdel Hafeez, & Mustafa Bahi: 2002). On this basis, the researchers used the experimental approach to his suitability for the nature of the problem to be solved.

### **3-2 Research sample:**

The research sample was chosen in the intentional way from the Al -Qurna Sports Club players in Basra Governorate, the youth category participating in the local championships, where the research sample consisted of (5) jump ups for the season (2021/2022), and they represent 50% of the original research community. Also (2) jumps were chosen in the random way for the purpose of the exploratory experience from outside the research sample, and homogeneity was carried out for all variables for the research sample individuals as in Table (1).

**Table (1)**

**Shows the sample of the sample with a coefficient of Kurtosis in weight, length, age and training**

Body measurements	Unit Measurement	Mean	Mediator	Standard deviation	Kurtosis
Weight	Kg	62.400	61.000	2.049	-0.443
Length	Cm	171.000	170.000	2.082	-0.156
Age	Year	21.600	21.000	0.342	0.166
Training age	Year	4.600	4.000	0.548	-0.109

**3-3 The means and devices used:**

- 1- High jumping device
- 2- Measurement tape
- 3- Jumping barriers
- 4- Wooden
- 6- Time watch
- 7- A measuring procedure listed
- 8- Skin belt

**3-4 Information collection means:**

- Arab and foreign sources and references
- Test and measurement
- Note and experimentation
- International information web
- A form to record and empty data.

**3-5 Steps to conduct research:**

**3-5-1 Exploratory Experience:**

The exploratory experience was conducted at ten o'clock in the morning on Saturday, 6/15/2022 in the track and stadiums of Al -Qurna Sports Club on (2) players who were chosen in the random way without the original research sample and the purpose of it was:

- Ensure the ease of tests and the possibility of implementing them.
- Ensuring the time of implementing the training unit's repetitions and their groups, as well as determining the times of comfort between groups
- Learn about the efficiency of the assistant team.
- Stand on all the negatives that may affect the main experience during their implementation.

Achieving the scientific conditions for the test.

**3-5-2 Tribal tests:**

Tribal tests were conducted on 20/6/2022 in the field and stadiums of the Faculty of Physical Education and Sports Sciences, and all the circumstances of the tests were installed.

- 1. Test bending the stem to succeed stand.
- 2. Test of the elasticity of the apparent
- 3. A test from the standing position extended the stem to succeed with the fall of the head
- 4. Achievement test in high jumping

**3-6 The tests used in the research:** (Muhammad Shaar al-Din & Ahmed Metwally: 1999)

**3-6-1: trunk flexion test from standing**

The purpose of the test: measuring the elasticity of the spine

Tools: a leather or fabric belt, measuring bar

Performance specifications: From a standing position in front of a wall with the pelvic installation by the belt, the laboratory bends the trunk back to the maximum extent possible.

Registration: The distance is measured from the wall to the chin and registered

**3-6-2: Test of the elasticity of the apparent**

Test goal / measuring the elasticity of the apparent

Test specifications / test to show the extent of movement and flexibility

Test tools / existing

Senator is installed on it a small model parallel to the lendable land

The method of performance of the test / from the status of the numbness, the underlined laboratory holds that the beams are stretched out a full and parallel to the land, then the laboratory raises the arms to the larger without the elbow bending.

**3-6-3: A test of the standing position, extending the stem to succeed with the fall of the head**

The target of the test / measuring the flexibility of the spine and the muscles corresponding to the tidal muscles.

Test specifications / reading is either obligatory or negative

Test tools / measuring tape divided into centimeters

Test performance / from standing mode - bending the stem back with the head fall as possible, fixing the hands behind the head - measuring the distance from the bump of the seventh cervical paragraph and the fifth cotton paragraph and the difference between the distance from the body's straightness and its change reflects the elasticity of the spine Record / distance is an indicator of flexibility

**3-6-4 High jump Test:**

The purpose of the test: measuring the distance of the vertical jump.

Tools: timing watch, whistle. Data form

**3- 7 the training program:**

The researchers chose a set of elasticity exercises based on scientific foundations in identifying both intensity, comfort and repetition, and the implementation of the curriculum was as follows Appendix (1) :

- 1- The duration of the implementation of flexibility exercises (8) weeks for the period from 22/6/2022 to 22/9/2022.
- 2- The number of weekly training units (3) training units.
- 3- The weekly training days are (Saturday, Monday, and Wednesday).
- 4- The researchers relied on the rest to be the same time.

**3-8 posttests:**

The researchers conducted the dimensional tests on the research sample on 9/25/2022 at exactly nine in the morning in the stadiums and fields of the College of Physical Education and Sports Sciences/Basra University.

**3- 9 statistical means:**

The statistical bag (SPSS) was used to extract the following laws: arithmetic medium - standard deviation - mediator - twisting factories - T -Test Law for interconnected samples - the law of development.

**4- PRESENTING, ANALYZING AND DISCUSSING RESULTS**

**4-1 View the results of trunk flexion test from standing**

**Table (2)**

**Arithmetic mean and the standard deviation of the tribal and posttests, the value of the calculated (T), the level of error and the significance of the differences to test the trunk test to succeed the stand**

Test type	Test				Measurement unite	F	T Value collected	Error level	Significance of differences
trunk flexion test from standing	Tribal	post	Tribal	post	Cm	1.800	7.000	0.002	moral
	M	S	M	S					
	15	0.607	19	0.859					

**Moral at the error level (0.05), as the error level was smaller than (0.05) at a degree of freedom 4.**

Table (2) shows the results of the trunk flexion test from standing to succeed in standing in the tribal and posttests. The calculation of the tribal test was (15) cm, and the standard deviation (0.607). For the purpose of the moral test, the (T) and the level of error was used. The results showed that there were moral differences, as the value of the calculated (8,000) and the error level (0.002), which is smaller than (0.05)

**4-2 View the results of shoulder flexibility test:**

**Table (3)**

**The arithmetic mean and the standard deviation of the tribal and posttests, the value (T) value, the level of error and the significance of the differences for the test of the elasticity of the apparent.**

Test type	Test				Measurement unite	F	T Value collected	Error level	Significance of differences
shoulder flexibility test	Tribal	post	Tribal	post	Cm	3.100	11.000	0.003	moral
	M	S	M	S					
	10	0.837	13	0.987					

**Moral at the error level (0.05), as the error level was smaller than (0.05) at a degree of freedom 4**

Table (3) shows the results of the flexibility test in the tribal and posttests. The calculation of the tribal test was (13) cm, and the standard deviation (0.837). The morals were used (T) and the level of error. The results showed that there were moral differences, as the value of the calculated (T) was (11,000) and the error level (0.003), which is smaller than (0.05).

4-3 View test results from the standing position trunk with the fall of the head

Table (4)

Arithmetic mean, the standard deviation of the tribal and posttests, the value of the calculated (T), the level of error and the significance of the differences to test a test from the standing position trunk with the fall of the head

Test type	Test				Measurement unite	F	T Value collected	Error level	Significance of differences
standing position trunk with the fall of the head	Tribal	post	Tribal	post	Cm	3.000	6.247	0.003	moral
	M	S	M	S					
	20	1.563	23	1.095					

Moral at the error level (0.05), as the error level was smaller than (0.05) at a degree of freedom

Table (4) shows test results from the standing mode, extending the stem to succeed with the fall of the head in the tribal and posttests. And with a standard deviation (1.095), and for the purpose of the moral test, the difference (T) was used and the level of error. The results showed that there were moral differences, as the value (T) was calculated (6.247) and the error level (0.003), which is smaller than (0.05).

4- 4 View the results of the high jumping test

Table (5) the mathematical medium, standard deviation, the value of (T) calculated, the level of error and the significance of the differences to test the completion of the high jump

Test type	Test				Measurement unite	F	T Value collected	Error level	Significance of differences
high jump test	Tribal	post	Tribal	post	Cm	5.112	8.543	0.001	moral
	M	S	M	S					
	185	3.876	190	3.221					

Moral at the error level (0.05), as the error level was smaller than (0.05) at a degree of freedom

Table (5) shows the results of the high jumping test in the tribal and posttests, as the calculation of the tribal test was (190) cm, and the standard deviation (3.221). The difference in the difference of differences (T) and the level of error. The results showed that there were moral differences, as the value of the calculated (8.543) and the error level (0.001) and it is smaller than (0.05).

4-5 Discuss The Results Of The Tests:

Through tables (2, 3, 4, 5)) we note that there are moral differences in the results of the hiding, which is proportional to the fees followed by researchers in active warm -up exercises that have contributed effectively to the development of the level of flexibility of the parties working in the effectiveness of high jumping, and confirms That (Talha Hossam El -Din: 1994), which indicated that "the development of the training curricula for the basic goals, the choice of exercises that suit the nature of the event in each training unit and in the time term of units is one of the most important criteria for the success of the training curriculum" as the researchers believe that the development of the consensual kinetic capabilities came as a result The intensity of the effort in the exercises is suitable for the required speed based on the motor composition of the effectiveness, which was confirmed by (Raysan Khreibet, & Ali Turki: 2002), where they stressed that "the intensity of the effort is proportional to the speed required to perform the exercise and with the motor composition of the exercise in general" (. The researchers believe that the moral development of flexibility is due to the effective effect of the consensual switching of the working motor parties, which was confirmed by (Abdul Aziz Al -Nimr & Nariman Al -Khatib: 1996), quoting Owen, "The training in continuous and intensive exercise helps to improve the compatibility between the movement of arms and legs It helps to improve strength in the muscular groups operating in a manner that serves their performance properly".

5- CONCLUSIONS AND RECOMMENDATIONS:

5-1 CONCLUSIONS:

1-Flexibility exercises used in the training curriculum are effective in developing body joints (Neck, trunk and arms) for the research sample.

2- The active warm-up exercises are effective in developing the element of flexibility and thus the development of the level of achievement in the effectiveness of high jumping

5-2 RECOMMENDATIONS

1- The necessity of paying attention to flexibility in choosing the appropriate exercises in the training curricula in jumping activities, especially high jumping and jumping in the atmosphere to achieve good achievement.

2- The necessity of paying attention to the varied active and corresponding warm -up with the nature of the performance

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**Appendix (1)**

**A model of training units**

<b>No</b>	<b>Exercises used</b>	<b>Training intensity</b>	<b>Training volume</b>	<b>The between repetitions comfort the</b>
<b>1</b>	<b>(Long sitting - opening) bend the torso and touching the ground with the head and stability for (10) seconds.</b>	<b>%100</b>	<b>2×1</b>	<b>3 m</b>
<b>2</b>	<b>Swatting with the tangle of the fingers behind the neck, the colleague presses the feet adjacent for (10) seconds on the hip.</b>	<b>%90</b>	<b>2×1</b>	<b>3m</b>
<b>3</b>	<b>Polishing with the tangle of the fingers behind the neck, the colleague presses the feet outside for the hip for (10) seconds</b>	<b>%100</b>	<b>2×1</b>	<b>3m</b>
<b>4</b>	<b>(Long sitting) Movement moving forward and backward and for the maximum range, slowly, and stability (5) seconds</b>	<b>%80</b>	<b>2×1</b>	<b>3m</b>
<b>5</b>	<b>(Sitting the barrier) bending the stem of the imam, with the outstretched man touching and vice versa for (10) seconds.</b>	<b>%90</b>	<b>2×1</b>	<b>3m</b>
<b>6</b>	<b>(Standing) Stabbed the side by (10) seconds.</b>	<b>%90</b>	<b>2×1</b>	<b>3m</b>
<b>7</b>	<b>(Sitting - the feet are opposite) Pull the legs inside with pushing the knees with the elbow joint.</b>	<b>%70</b>	<b>2×1</b>	<b>3m</b>

