

# The Effect Of A Recreational Rehabilitation Approach Using Zumba Exercises On The Rehabilitation Of The Ankle Joint And Solving The Psychological Problems Resulting From Injury Among Basketball Players

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**Abstract:** *Recently, there has been great development in all different areas of life, in general and in the field of physical education in particular, the level of performance in all sports activities has increased, thanks to scientific studies and research, and the development of devices and tools in the field of physical education, and this has led to concern for the safety of the player and the rehabilitation Injuries as quickly as possible, and taking care of their mental health, by searching for methods and strategies to solve the problems facing the athlete and helping him to reach the highest levels of mental health, and this is what contributed to building an athlete generation that depends on sound scientific foundations.*

*Zumba exercises are one of the modern training trends, as they reflect one of the results of the scientific renaissance in a purposeful training method, which spread widely and rapidly throughout the world, and made a quantum leap in the field of sports, due to the elements of inclusiveness and recreation it contains, which are practiced in parks, and have a positive effect. In burning calories, improving general health, and zumba exercises is the integration of some principles of aerobic and resistance exercise, to increase the burning of calories, benefit blood vessels, and the harmony and harmony of the body as a whole "(Perez, 2009: 2), and depends on enjoyable movements and on the tones of music, thus It creates an atmosphere of comfort and pleasure for the participants (Awad, 2004: 12), in addition to its benefits in the psychological field, helping the athlete to face psychological pressures and the challenges they encounter in training, competition and problems resulting from injury, and increase the athlete's self-confidence, and to perform his daily work with high efficiency. With saving effort and time, Its practice has spread in more than (120) countries and for both genders, and has met with great interest, because its programs are implemented on a regular basis.*

*Rapid developments occur among the participants, which reflects on the performance and performance of the functional devices, thus reaching the achievement of practical training objectives (Naoush, 2006: 21). Therefore, the importance of research lies in investing in zumba exercises in rehabilitating the athlete after injury and solving psychological problems resulting from injury, and increasing the athlete's confidence in himself through, developing a recreational rehabilitation curriculum to root and care for the mental health of basketball players.*

## 1. RESEARCH PROBLEM:

Through the work of researchers in the field of training and academic teaching, they noticed that many coaches focus on adopting traditional methods and methods in preparing training programs, and the emphasis is not on rehabilitating the player greatly and returning him to play as soon as possible and with the least effort, and they do not focus on the psychological state and problems that the athlete suffers. As a result of injury, so the two researchers decided to find some modern and easy solutions to rehabilitate sports, take care of his mental health, and restore his self-confidence.

### *research aims:*

Identify the effect of the recreational rehabilitation approach, using zumba exercises, in rehabilitating the ankle joint and solving problems caused by injury to basketball players.

### 4. Research hypotheses:

There are statistically significant differences between pre and post measurement in the rehabilitation of the ankle joint and in solving the problems caused by the injury.

### Research areas:

- The human field: a group of basketball players in the rehabilitation phase of an ankle injury.
- Spatial domain: the closed hall / Youth and Sports Directorate / Diyala.
- The temporal domain: for the period from 1/7/2020 until 1/11/2020.

## 2. RESEARCH METHODOLOGY AND FIELD PROCEDURES:

### *Research Methodology:*

The experimental approach was used in a method for the single experimental group with a pre and post test.

### *The research sample:*

The research sample was chosen by the deliberate method from those recovering from ankle injury and registered in the Department of Sports Medicine and Physiotherapy / Baghdad, and their number is (8) players. Means, devices and tools used in the research:

### Methods for gathering information:

The two researchers used the following methods to collect research data:

- Sources.
- Personal interviews.
- Tests and measurements.
- Data collection form.

### devices:

- The goniometer to measure the full detailed range of motion.
- a chair.
- Deal laptop.

### *Exploratory experience:*

The two researchers conducted an exploratory experiment to identify:

1. The extent of the sample's interaction with the recreational rehabilitation curriculum.
2. The time required to conduct the curriculum.
3. The problems and obstacles that the researchers may face.

### Field research procedures:

### Tests used:

After determining the research variables and determining the measurements and tests that are commensurate with the research variables, depending on scientific sources and personal interviews, the researchers used a goniometer to measure the angles of joint bending, lateral bending, medial bending, back foot bending, fifth foot bending, and recording data in a special form for that.

The researchers used the psychological manifestations caused by injuries scale, which was prepared by Dr. Ghazi Saleh Mahmoud and others, which is a scale consisting of (32) items in which the answer is for five alternatives, which are: (large, medium, few, very few). And the opposite is true for the negative paragraphs, so the upper limit of the total scores that the subject gets will be (160) degrees, while the minimum will be (32) degrees.

*Research procedure steps:*

1. Pre-tests:

The two researchers conducted the pre-tests by distributing the scale to the sample of the research under study, and then collecting the information (data) in a special form prepared for this purpose.

2. Application of the recreational rehabilitation approach:

The two researchers applied the recreational rehabilitation approach using zumba exercises, which are aerobic rhythmic exercises designed to promote and use oxygen in the blood, and zumba exercises: they combine some principles of aerobic and resistance exercises, to increase energy, and it is also a group of postures and physical movements that targeting to shape and build the body and develop various His Kinetic abilities, in order to reach the individual to the highest level of athletic and functional performance in different areas of life, based on the educational and scientific foundations of the art of movement (Assi, 2000: 6).

The researchers used these exercises with the help of CDs that were displayed on a large screen for some exercises that the athletes performed and carried out, as they included Latin songs (salsa, samba, hip-hop, and marangi), and the researchers observed how the hall revived with energy and fun during the exercise of these exercises.

A time of (20) minutes was allocated for each training unit, its number (3) units per week, and the progression of the curriculum from easy to difficult for a period of (3), i.e. (48) rehabilitative units.

Post- tests:

After the end of the recreational rehabilitation units, the two researchers conducted post-tests and collected data in a special form to be treated statistically.

Statistical means:

The researchers used statistical truth (SPSS) to extract the results.

**3. ANALYZE AND DISCUSS THE RESULTS:**

*Display results:*

Table (1) shows the values of the arithmetic mean and the standard deviations in the pre and post- tests of the search variables						
		Mean	N	Std. Deviation	Std. Error	Mean
Distal Bending	Pre-test	10.425	8	0.628		0.222
	Post-test	12.525	8	0.881		0.312
Medial Bending	Pre-test	20763	8	1.138		0.402
	Post-test	23.263	8	0.986		0.348
Bending back	Pre-test	11.763	8	0.763		0.270

	Post-test	13.613	8	0.331	0.117
Feet Bending	Pre-test	40.438	8	0.752	0.266
	Post-test	42.715	8	0.716	0.253
Psychological aspect	Pre-test	85.625	8	6.323	2.203
	Post-test	120.125	8	7.846	2.774

Table (2) shows the values of the arithmetic means, the standard deviations, the calculated (t) value and the error rate in choosing the measurement of the kinematic range of the joint and the measurement of solving psychological problems

	Mean	Std. Deviation	Std. Error Mean	T	DR	Sig
Distal Bending	-2.100	0.417	0.148	14.228	7	0.000
Medial Bending	-2.500	0.930	0.329	7.600	7	0.000
Bending back	-1.850	0.605	0.214	8.653	7	0.000
Feet Bending	-2.278	0.563	0.199	11.448	7	0.000
Psychological aspect	-34.500	7.111	2.514	13.722	7	0.000

Table (2) shows the arithmetic means, standard deviations, the calculated (t) value, and the percentage of error in the ankle joint motor range test.

To find out the differences between the arithmetic meanings between the pre and post- tests in the test under investigation, the researchers adopted the (t) test for one sample, and to verify the significance of the differences, as the value of (t) calculated in the test of the Kinetic range of the ankle joint (Distal Bending) was (14,228) and with an error percentage (0,000) which is smaller than the significance level (0.05), and at a degree of freedom (7), which indicates the existence of a significant difference in favor of the post test.

As for the test to measure the range of motion of the medial Bending joint, the value of (t) calculated for the pre-test was (7,600) and error percentage (0,000), which is smaller than the level of significance (0.05) and with a degree of freedom (7), which indicates the existence of a significant difference in favor of Post- test of the Bending extent of the back of the foot.

As for the test to measure the range of motion of the joint bending of the Feet Bending, the value of (t) calculated for the test was (11,448) and the error percentage (0,000), which is smaller than the level of significance (0.05) and below the degree of freedom (7), which indicates On the presence of the difference measurement test bend the Fe As for the psychometric test in confronting psychological problems resulting from sports injury, the calculated value of (t) was (13,722) and the error percentage was (0,000), which is smaller than the level of significance (0.05) and below the degree of freedom (7), which indicates the existence of A significant difference in favor of the post- test in the measurement test for coping with psychological problems caused by the injury.

Discuss the results:

The values of the angles shown in Tables (1 and 2) express the presence of significant differences between the values of the results of the pre and post- tests in all variables of the range of motion of the ankle joint, and it is evident from these differences that the research sample after undergoing the recreational approach using zumba exercises was better before using the approach, and the improvement was in All research variables, and due to an increase in the Kinetic ranges of the angles of the ankle joint, as "rehabilitative exercise exercises achieve several purposes, including the improvement of the articular Kinetic range" (Nahid, 2011: 157).

(Khalil, 2020) mentioned that exercise increases the range of motion of the joint and improves the performance of the ligaments and tendons surrounding the joint.

This is in agreement with (Adel Abdul-Basir) that stretching exercises in the recreational rehabilitation curriculum using zumba exercises aim to lengthen the muscles, ligaments, and tendons, and increase the range of motion in the joints, which are among the most important means of developing flexibility (Abdel-Basir, 1999: 195).

The researchers believe that the application of the recreational approach, the gradation in the corners, and the stress in the development of rehabilitative and stomach exercises in an organized and gradual manner has a positive impact on improving the Kinetic ranges of the joint angles (lateral and medial flexion, the back of the foot, and the sole of the foot), which helped in improving the work of the ligaments and tendons surrounding the ankle joint. And it is healing.

Hamill (2009) states that an increase in the range of motion means an improvement in the elasticity of the tendons surrounding the joint, as well as an improvement in the neuromuscular action in controlling the functioning of the sensors responsible for this range (Hamill, 2009: 70).

The researchers attribute these results to rehabilitative recreational exercises using zumba exercises, as the researchers took into account the nature of the sample members, the age of the injury, and the progression in planning and implementing these exercises, and that this development indicates an improvement in the nature of the muscular work in the contraction and extension of the muscles surrounding the joint, which in turn increases The loosening of the angles that is in fact an increase in the range of motion, which depends on the elasticity of the muscles, to the development of muscle strength, its tendons, and the ligaments surrounding the ankle joint, after its recovery, as the movement amplitude in the joint increases with the increase in the level of strength (Abdel Fattah, 1992: 284) .

Increasing the strength of the working muscles of the joint has importance in protecting the joint from injury or recurrence, and that works to increase the range of motion of the joint, as well as the ligaments, tendons and muscles the main drive of the joint, as the ligaments, muscles, and tendons affect the stability of the joint through the cohesion of the end of the joint bones It is necessary to obtain a situation in which the main parts of the body are balanced and orderly above the base of support, and the organizational relationship between those parts is sound, in order to enable it to perform its functions efficiently and less Effort (Asaad 1985: 10), and that rehabilitative recreational exercises had a role in the speed of improvement of the ankle joint, pleasure, and change, and on different rhythms, and with different and varied loads and sizes, which led to a great contribution in returning the joint to the normal or near-normal range, in addition to Eliminate the factor of boredom, and that every increase in stress and pregnancy is matched by an increase in the practical capacity of the muscular systems to ensure their growth and development (Ali, 1988: 122).

Discussion of the measurement test against problems caused by injury:

The difference in the pre and post tests expresses the measurement of solving psychological problems resulting from injury and in favor of the post test, and the researchers attribute that to the fact that the rehabilitative approach had a prominent effect on improving the psychological state of basketball players, and increasing self-confidence in returning to the practice of sports activity after rehabilitation from Injury, and the provision of physical and social support for the athlete, and this is in agreement with (Mustafa, 2009) that "encouraging the athlete in rehabilitation from injury to social interaction and his participation and members of the team in all activities and helping him to restore his confidence in himself and his ability to cope with injury, build the relationship with the player, and introduce him." The extent of his injury, the method of re-healing, positive talk, and rehabilitation of the injury is

easy”(Mustafa, 2009: 48), and this is what was included in the rehabilitation curriculum, as well as practicing physical exercises in a recreational, enjoyable, and interesting way.

#### 4. CONCLUSIONS AND RECOMMENDATIONS:

##### *Conclusions:*

In light of the objectives of the research, its hypotheses, its sample, its procedures, and the results of the statistical data from the tests, the two researchers concluded:

1. The recreational approach using zumba exercises was instrumental in advancing the rehabilitation of the ankle joint injury.
2. The prepared recreational curriculum has an important role in improving the psychological state of basketball players, increasing their self-confidence, and returning them to activity as soon as possible.

##### *Recommendations:*

1. Using recreational methods, especially zumba exercises, to rehabilitate the injury to the ankle joint, and raise the moral and psychological state of the athlete.
2. Starting the rehabilitation procedure after the end of the drug treatment phase.
3. Paying attention to gradually increasing the strength to increase the range of joint angles, as it has an effective role in improving the joint and then performance.

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