



ISSN Print: 2664-7281
ISSN Online: 2664-729X
Impact Factor: RJIF 8
IJSEPE 2023; 5(2): 44-48
www.sportsjournals.net
Received: 16-03-2023
Accepted: 20-06-2023

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Rehabilitation program for ankle sprain injury among club players for track and field games

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DOI: <https://doi.org/10.33545/26647281.2023.v5.i2a.48>

Abstract

Joint injuries are among most common injuries in stadiums because they are more moves than rest of parts of kinetic system and include twisting injuries, which is one of common injuries and occurs in difference games such as football, track and field games (barriers), which is injury of joint ties due to an external intensity that leads to destruction or rupture Partial oligarchy to link or more of joint ties. It is one of most concerns that player when he enters competition or even during training is injury and it is his biggest concern because it causes him to leave competition or not to enter it at all because he is infected. This infection is many sports in which feet are used greatly, such as football, track and field games.

Researcher used experimental curriculum in design of pre-test measurement, measuring of middle test and measuring post- test group.

Most important Recommendations were

1. Implementing proposed qualification program for what has a positive impact on speed of recovery and development of physical changes for all injured players.
2. Necessity of conducting more studies on athletes practicing games and field games and thus legalizing protection programs.

Keywords: Ankle sprain injury, club players, track and field games

Introduction

It is known that sports injuries of all kinds occur as a result of physical activity, where it is recreational, during training or competitions, and injury varies according to activity practiced and according to nature of activity and its characteristics and parts concerned with activity and muscles working on it and it has been proven in references and scientific studies of sports medicine With activities, as sports training and high training sizes in addition to shape, strength and large number of sports competition are factors that contribute to increasing motor pressure on joints and muscles working in technical performance primary goal of studying sports injuries is to spread health concepts when exercising sports activity and emphasizing preventive procedures that prevent or reduce fanatical injuries are not very different from accident injuries, but represent a very serious disability for sports gaming practitioners, especially if body is exposed or part of it. To a force that exceeds body's endurance ability. Which reduces level of performance of physical and skillful players, and it may be reason for early retirement, and this means losing energies that can have a major role in achievement, achieving medication and raising country's name. Joint injuries are among most common injuries in stadiums because they are more moves than rest of motor system and include sprain injuries, which is one of common injuries and occurs in difference games such as football, track and field (barriers), which is injury of joint ligaments due to an external intensity that leads to destruction or Partial oriental rupture of one or more fastening and sprains occurs as a result of joining of joint bones "as it comes out of its natural place to infect surrounding ligaments and n return again to its normal place at same time" (Abbas Hussein: 2013) ^[12] and sprain in ankle occurs when foot wraps or foot moves in a way Unnaturally outside normal range of joint, "And when tendency or fall, body weight constitutes a great strength when landing, and this causes stretching of ligaments more than its normal rate, which exposes it to rupture, and this results in pain and swelling." (Ahmed

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Hamdi: 2012) ^[1] And this injury abounds in sports where feet are largely used, such as football, track and field games. therefore, importance of research lies in developing a program for therapeutic exercises to treat injury of medium ankle twisting after fifth day of injury, that is, after swelling and player can walk in order to quickly qualify player to return and practice his sports activity and with same physical and functional efficiency that he had before injury occurred.

Research problem

One of most concerns that player is when he enters competition or even during training is injury, which is his biggest concern because it causes him to leave competition or not enter it at all because he is infected. Depriving player from competing with his time with training in order to achieve results, has psychological effects in addition to physical pain caused by injury, which increases pressure on sport so that rehabilitation process after injury aims to return player to stadium as soon as possible with an attempt to maintain physical level and skill of player who It was before injury or reduce loss as much as possible in addition to psychological support, raise morale and implant self - confidence, which is a continuous process that begins during medical treatment of injury and extends until after medical treatment. As taking early and necessary measures in proper ways and protecting athlete from complications, and choice of best appropriate rape tic and rehabilitation methods that achieve complete recovery and speed of return to practice sports activity because post -injury physical therapy is a completion of treatment. Follow -up to condition of players and athlete through medical reports of coach director, and team doctor, would show extent of medical sponsor that injured player met, and this is "preventing risk of error in diagnosing injury" (Majdi Al -Husseini: 2000) ^[7] through researcher's experiences as a specialist, a school at university, a swimming coach and a fitness in health club additional to Seeing stadium injuries, I noticed that injury of ankle joint is one of most common injuries to barrier players and wide jumping, and for both sexes and with different strictness and for many reasons, most important of which is incompleteness of fitness elements of physical fitness well and quality of shoe used in addition to training pressure on joint, which leads to joint injury and thus It hinders course

of sports work and hinders progress of performance level, so I went to conduct a study to develop a rehabilitation program for ankle twist injury.

Research Aims

1. A rehabilitation program for ankle joint injury to inside.
2. Reducing inflammation, reducing pain and preventing adhesion tissue
3. Stringing muscles working on ankle joint.
4. Kinetic range of ankle joint for what it was before injury.

Research hypotheses

There are statistical differences between Pre – test and post - test of players of track and field in physical variables and for benefit of post- test.

Research fields

Spatial field: Basrah University Consultant Center.

Time's field: During from 15/3/2022 to 19/6/2023.

Human field: Players of square and field games in Al - Zubair Sports Club and Shatt Al -Arab Sports Club in Basrah Governorate for season 2022/2023.

Research Methodology and Field Procedures

Research Methodology

Researcher used experimental curriculum to suit it nature of research.

Research Sample

Research community included players of track and field in Al -Zubair Sports Club and Shatt Al -Arab Sports Club from those with ankle and sample that “represents origin or model community that researcher is taking place and its axis is on it” (Wajih Mahjoub: 1993) ^[8] goals that kurtosis researcher set "for his research and procedures he uses are what determines nature of sample he chooses" (Risan Khreibet: 1987) ^[3] research sample was chosen in intentional way from injured in track and field games for clubs of Basrah Governorate. Ankle joint twisting and subject to physical rehabilitation and treatment programs by specialized doctors, Table (1), shows distribution of research sample.

Table 1: Description of study sample

case	Length cm	Wight kg	Age year	Training age	Type of injury	Injury degree
1	180	76	23	4	Partial rupture of brutal (Outer) lateral ligament	Medium Severity
2	177	74	22	4	Partial rupture of brutal (Outer) lateral ligament	
3	173	72	23	4	Partial rupture of brutal (Outer) lateral ligament	
4	179	75	24	4	Partial rupture of zebra (Outer) left leg	

Table 2: Shows calculations, standard deviations, value of mediator and value of coefficient of kurtosis for all research variables

Variables	Unite measuring	Mean arithmetic	Standard deviation	Mediator	Kurtosis
age	year	23	8.16	23	1.50
weight	Kg	74.78	1.08	74.85	0.350
height	poison	177.74	2.33	178.16	0.16
strength of ankle muscle	Kg	4.54	0.45	4.61	2.97
Fixed balance (Stand on combs)	second	5.75	0.88	5.57	1.04
kinetic range of dorsal bending of ankle	Degree	20.62	0.56	0.70	0.41
kinetic range of planting fold	Degree	5.94	0.72	6.11	0.95
kinetic range of coup is inside	Degree	19.19	0.16	19.18	1.52
kinetic range of coup abroad	Degree	19.7	8.16	19.50	0.34

from Table (2) that values of spraining transactions in variables under researchers have been limited between (3 ±) and this indicates that distributions are close to moderation in each of variables (age, weight, length and strength of muscles operating on ankle joint and kinetic extent of ankle joint) It indicates homogeneity of search sample.

Table 3: Shows relative importance of physical elements that have been nominated by experts

No	Physical fitness elements	Relative importance
1	strength of muscles operating on ankle joint	95%
2	Balance	100%
3	kinetic range	100%

Means and Tools used in Research

Researcher has based on collecting data related to this research on following means and tools:

1. Reference Survey: researcher reviewed scientific references specialized in sports medicine, injuries and rehabilitation, in order to determine reference background with most important basic variables to manage rehabilitation process after ankle joint kurtosis was infected, as well as identifying main variables of rehabilitation process in addition to job tests for measuring those variables for good Directing qualifying program.

2. Clinical Examination Tests: Where attending physician uses some clinical tests to help identify and diagnose infection, (Todd. s & George. J: 2000).

Tools and devices used in Research:

1. Information collection means

- Arab and foreign scientific references and sources and international information network (internet)
- Personal interviews
- Data Register form
- Experts 'viewing form on validity of rehabilitation program used.

Devices and tools used

- Restamter to measure length of centimeter and weight of kilogram.
- Gonometer to measure motor range of ankle joint.
- Mollitage device (strength measuring muscles operating on ankle joint.
- Prepare Crio for cooling
- Medical bed (Sidia)
- Stop hours
- Medical balls

Table 4: Shows significance of differences between two tribal and post -measures of research sample in variables of strength and balance

Variables	M/U	Pre- Test		Post-Test		T Collected value	Sig value	level of indication
		M	S	M	S			
Strength of muscles operating on ankle joint	kg	4.54	0.45	18.08	0.70	27.29	0.000	moral
Standing one instep (fixed balance)	Sec	5.75	0.88	17.95	0.11	26.35	0.000	moral

From Table No. (4) existence of statistically significant differences at level of significance (05) between Pre and post -measurements of experimental group in some physical variables (balance- muscle strength), where value of (T) of muscle strength variable (27.29) came and value came (T)

- Swiss football
- Cheer
- Swedish seat
- Rubber ropes
- Erotic steak.

Procedural steps to study

Basic Experience (qualification program)

Researcher conducted study on a sample of (4) players, on affected party with regulation of intensity, size and density of exercises, and qualifying curriculum was applied to players who have been infected from (5-7 days). unit from (30) to (45) minutes according to progress in curriculum stages, and qualification curriculum was implemented from (12/3/2023) to (15/6/2023) where unit is divided into three main parts (warm -up main, final), each training therapeutic unit of qualifying curriculum units begins with. A cold thermal incite to vascular contracting to relieve nervous transport, prevent inflammation and relieve pain, as affected part of cold is exposed with a low temperature "(Abbas Khalil: 2018) and n perform a set of body movements to warm researcher used static and moving strength exercises with help and exercises of muscles operating on ankle joint and motor extent of ankle joint and some resistance exercises and specialized exercises taking into account principle of gradient and moving from easy to difficult, after unit ends, relaxation is practiced.

Field search procedures

Pre measurement

Pre-measurements of research sample were conducted on 20/2/2023 in research variables (length, weight, time age), as well Barriers.

Implementing Basic Experience (Qualifying program):

Qualification program was applied to research sample during period from 10/3/2023 to 12/5/2023 as in an appendix (1).

Post -measurement

Post-- measurement of study sample of measurement unit was conducted on 13/5/2023 for all research sample players.

Statistical processors: researcher used SPSS statistical bag 19.

View and Discuss Results

Presentation and Discussion of Results of Physical Variables

calculated for balance variable (26.35), which is higher than (T) Table value at level of significance (0.05), which indicates existence of statistically significant differences between Pre and post - measurements of experimental group in variable of muscle strength and balance variable.

Table 5: Shows significance of differences between two pre and post -averages of research sample of range of kinetic Range

Variables	M/U	Pre-Test		Post-Test		T Collected value	Sig value	level of indication
		M	S	M	S			
Kinetic range of dorsal bending of ankle	Degree	20.62	0.56	30.22	0.67	39.66	0.000	Moral
Kinetic range For extent	Degree	25.94	0.72	37.44	0.87	60.04	0.000	Moral
Kinetic range of coup is inside	Degree	19.19	0.16	31.17	0.52	45.80	0.000	Moral
Kinetic range of coup abroad	Degree	19.72	0.94	29.47	0.67	44.04	0.000	Moral

from Table (5) that there are statistically significant differences at level of significance (0.05) between pre and post -measurements of experimental group in extent of extent of ankle joint, where value of (T) calculated for appearance variable of ankle joint (39.66) came and value of (T) Calculated for fumes of ankle joint (60.04), and value of (T) calculated for coup variable came to interior (45.8) and value of coup variable came to outside (44.04) and all these values are higher than (T) tabular value at degree of freedom 3 level of significance (0.05). This indicates existence of statistically significant differences between pre and post-measurements of experimental group in range of kinetic range.

Discuss Results

First-discussing results of level of muscle strength variables and balance

Through two tables (4) and (5) we note that there are differences in mimetically median between Pre and post -measurements and in favor of dimensional measurements of search variables (strength, balance and motor extent) that showed a noticeable improvement in post -measurement of research sample and researcher believes that qualifying exercises that have graduated from Easy to difficult, as researcher in first units of program used static strength exercises from sitting position and with simple frequency so that injured player can perform it, especially with presence of swelling and pain in addition to diversity of exercises. desired benefit has achieved reduction of pressure that in turn reduces pain as it achieved an increase in bloody irrigation to facilitate Get rid of waste and infection waste, and this is what Mackeenzie indicated, " (Mackeenzie: 1989) ^[10]. Blood circulation activity in affected area, which "helped reduce swelling, prevent terrorism, reduce pain and recover from injury" (Karar Jamal & others: 2020) ^[6]. cariao device is a device that works to analyze fat by cooling and gives cold air with a temperature of 30 under " refrigeration of fat analysis leads to important clinical improvements in body's vicinity and a decrease in thickness of fat layer and is used before performing treatment exercises for better pain relief (Gregory, H). Also, use of various residences helped to respond to rapid response of muscles and reflect extent of good compatibility within muscle by stimulating kinetic units of muscular work and that concentration of affected player in his application of exercises on muscles concerned and not to pressure affected joint. accomplished for development of muscle strength, while emphasizing importance of size of resistance used and attention to amounts of this resistance and amount of muscle contraction" (Wilkic, D: 1998) ^[11]. Use of weightlifting in strength development exercises leads to a noticeable increase in strength of muscles Weightlifting in training "leads to speed of progress of level of motor performance." (Adele Saad: 1976) ^[2] Also, curriculum contains balance exercises and exercises to elongate muscles and joint flexibility has a significant effect in improvement and

recovery, especially when performance of exercises is gradual and outside pain area. And flexibility maintains soft and strong muscles with a good movement of nature of qualified approach prepared by researcher and followed by research sample personnel in which exercises varied at scientific foundations, including use of strengths, rubber, burden, walking, and balance of movements and with various repetitions commensurate with nature of players 'capabilities with use of Cariao, as well nature of adaptations that occurred as a result of frequency of exercises increased strength of muscles and possibility of motor performance of players and thus development in motor capabilities of players and speed of return to stadiums so researcher attributes that reason for great development that took place in performance of research Which created results of pre and post -tests in favor of post -tests.

Conclusions and Recommendations

Conclusions

1- Presence of statistically significant differences between pre and post averages at level of balance elements, flexibility and muscle strength in research sample.

Recommendations

- 1-Implementing proposed qualification program because it has a positive impact on speed of recovery and development of physical variables of all injured players.
- 2- Necessity of conducting more studies on athletes practicing games and field games and thus legalizing protection programs for m.

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Appendix (1) A model of Rehabilitation

week	Time	Rest Between repetition	Rest Between groups	Exercise	Not's
First Week	10 m	-	-	A session on Curio	
	23 m	10 sec	15 sec	5 m preparatory exercises From sitting position trying to touch feet to each or from interior 10 sec From sitting position, lift foot and moving combs towards body From sitting position, raising foot and moving combs to brutal side, stability 10 sec, three groups From sitting position, raising foot and moving combs to forgotten side and stability 10 sec three groups From sitting on chair, installing combers and raising two stability 10 sec three groups. -From sitting position, moving infected foot on a 10 –sec ball three groups From sitting position on seat, lift feet and moving combs together four directions to right	Stop performance in event of pain -Work expansion outside an area