

THE IMPACT OF A PROPOSED REHABILITATION APPROACH USING SOME OF THE TOOLS AND THERAPEUTIC EXERCISES TO REHABILITATE THE MUSCLES OF THE LOWER LIMB INJURIES BASKETBALL PLAYERS (YOUTH)

** Mohammed Mutlaq Badr Al-Saadi ** Shehab Ahmed Hammoud*

**Mustansiriya University / College of Physical Education*

*** Diyala University /College of Physical Education*

Abstract

The study included four sections, the researcher in the first section introduce to the idea of research, in view of the development of physical and sports activities and increase the burden on athletes and the requirements of this increases the probability of the occurrence of sports injuries and this may adversely affect the athlete's physical condition and therefore tender in addition to the possibility of aggravation of the injury and the subsequent consequences and effects on solid athlete.

And summarized the goals Search by:

1. Therapeutic approach using specific therapeutic means for basketball players put (youth).
2. Identify the effect of therapeutic and rehabilitative approach to the research sample members in the tribal tests reported in a posteriori.

Kdastkhaddm researchers and experimental approach Kmaachtert sample-style intentional The most important bricks adopted by researchers to reach the search results that he used a variety of means for the purpose of determining the severity of the infection and measured in addition to verification of the level of success of the proposed approach after its implementation and this means is:

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The researchers used the experimental method was selected as the sample-style intentional The most important bricks adopted by researchers to reach the search results that he used a variety of means for the purpose of determining the severity of the infection and measured in addition to verification of the level of success of the proposed approach and after the implementation of these methods are:

1. Measuring thigh circumference infected man
- 2- Measure the degree of pain
3. Measuring degree of strength in legs
4. Measure the strength of the muscles of the thighs front
- 5- Measure the strength of the muscles of the back thighs

Then introduced the research sample of the proposed approach qualifying for this researchers used a number of therapeutic means and identified according to the opinion of doctors and the type and severity of injury where identified casualties bruise muscle and tear muscular simple, medium, and the means as a blogger in below where experts identified four of the means used researchers begin treating hour injury and even start rehabilitative approach, namely:

Infrared (I.R).

- Cooling.
- Massage device (electric massage).
- Manual massage.

After processing the results statistically they found a set of conclusions are: And no statistically significant differences between tribal and dimensional tests for the research sample of indicators for reducing the degree of pain

- 1- And no statistically significant differences between tribal and dimensional tests for the research sample of indicators for the development of strength degree in legs.
- 2- No statistically significant differences between tribal and dimensional tests for the research sample of indicators for the development of muscle strength femoral front.

KEYWORDS: Rehabilitate. Muscles. Injuries

1. INTRODUCTION

The sports medicine and physiology of sports training of the most important areas in which there are a lot of developments in recent years because of scientific experiments and research that was and is still the only concern is to raise the technical level of the sport in general and the access level athletes to the highest possible where there are no more limit to reach him and stop him but everything has become possible to take advantage of it for the development of the sports level.

The progress and great development in the field of sports led to higher progress in other sciences related to the sport of all, because of this science from a great relationship in sports activity, which affects directly on the development of systems and vital organs of the athlete according to the effectiveness of the practice, especially in the field of sports medicine and rehabilitation, which saw a major development for the re-injured players to practice sporting events and avoid a repeat of the injury again.

This science has contributed to the development of methods of training and legalization of training loads to be more suitable for the body's ability to endure and benefit from the positive effects of the state of the functional body, however, the training curriculum vocabulary with all its components receive the various organs of the body and joints and Erbth and tissues and muscles and a large button, whether at sports training or competition, or when sports injuries that injuries may be the result of stress athlete or as a result of friction instrument or discount, as well as, the injury rate increases if the athletic training in a non-scientific, using mathematical tools inappropriate for the age or fitness of the individual.

Statistics have shown that basketball effectiveness of events included a lot of injuries related to motor device ears occupies second place after the ice hockey, which came first place Larry, F, Ellison, 1995: 3)), and from here, but in order to contribute to the rehabilitation and the return of injured players and their return to stadiums came the importance of research, which lies in avoiding the arrival of the player to cases of muscle injuries and chronic or so-called deficit muscular chronic resulting from the return of injured player to stadiums without undergoing a qualifying program leading to a doubling of the injury and then not feel the player pain in spite of the injury, because the that the injury took a new shape structurally, which led to chronic infection as well as the enrichment of our library sports such Thus Research.

Research problem:

The privacy and the nature of the requirements contained in the game of basketball from a complex physical movements and friction direct between the players, and what difficult and complex and the large and small joints and ligaments where the bones of the combination, and through experience and observation researcher for being one of the basketball players previously coached currently. Found that there are a lot of injuries occur to the player, leading to obtain distortions result in a lot of players excluded and the loss of this event for them, because of the lack of presence exercises a private rehabilitation aims to return them to the stadiums to practice their sport again and the lack of incidence again and the lack of methods for the preparation of physical proper chronological age at the beginning of the training.

Increasing the proportion of injuries among athletes greater the unit sports competitions and spread, especially muscular nervous system injuries, as it constitutes sports practice pressure on joints and ligaments and purses Synovial and tendons, muscles and bony vertebrae of the spine, which may cause chronic injury, as well as the injuries resulting from friction with discount and falls suffered by the player that form are other broader level of these sports injuries, and a review of the technical types to those injuries, according to informed researcher, the majority of injuries and a large proportion were the bruises muscle and dislocations hinge and tears the muscle and tendons that these injuries due to the lack of commitment to the application of training assets modern scientific as well as the lack of proper diagnosis of the injury to the lack of a specialist doctor, as well as the lack of scientific methods and technical treatment, and the effect of the male and for the return of injured players to the stadiums were therapeutic means diagnosed and exercise rehabilitation, one of the most central means impact in the treatment of injured athletes and rehabilitation as well as accelerate the restore muscles and joints functional potential.

So he saw the researcher to use a training curriculum therapeutic rehabilitative some means of various therapeutic modalities aimed involved with training qualification upon completion of the treatment of basketball players after infection attempt by the researcher to complete ready player to achieve sporting achievement required based on the basis of the relationship between the physiology of sports training and requirements of physical therapy that relationship that from which to address the lower limb muscle injuries that may lead to the disruption of the balance of forces inflicted in the case left, leading to acute and chronic injury and then move away from the stadiums.

The research aims to:

1. Therapeutic approach using specific therapeutic means for basketball players put (youth).
2. Identify the effect of therapeutic and rehabilitative approach to the research sample members in the tribal tests reported in a posteriori.

2. MATERIAL AND METHODS

The researchers used experimental method for the suitability of the research problem.

The research community and appointed:

Chose researchers appointed by the basketball players youth neo-induced and that the nature of the study, which requires the identification of injuries, players and treatment for this the researchers choose (8) players of all young players in Suleikh Sports Club and Club Baghdad Municipality sports at a rate (4) players from the Municipality of Baghdad Club and (4) players from the players Selakh Sports Club chosen way intentional who have an injury to the lower sides and the fact that research depends on the injury and diagnosis which in turn is dependent on the lengths or weights or even old training.

Tests and measurements used to search:

I've been testing and measurements on a group of experts before starting the exploratory experiment and after the application of this experience all the tests and measurements is ready for application, as follows.

Measuring thigh circumference infected man:

- The purpose of the measure:

Measuring thigh circumference of the infected man.

- Tools used:

Terrace suitable height standing by the player.

- Description of performance:

Stands injured player upright and then are measured thigh length "of the greater trochanter of the head Supreme femur and even brutal edge detailed mid-knee" (1-63) then is multiplied by the value of $(\text{length} \times 1/3)$ is obtained by one-third the length of the groin area. "after determining the lower section area is measured by total hip circumference measuring tape.

Measure the degree of pain:

That measure the degree of pain diagnosis and Rated and treatment is subject to the doctor's opinion was the consultant physician, another of the support staff in the diagnosis and treatment of sports injuries diagnosis of injury and determine the degree of pain and then determine the means by which that can cut off the pain was then a post-test to determine the degree of pain.

measure the strength degree of the muscles of the two men:

- The purpose of the measure:

- measuring muscle strength of the quadriceps front and rear test bend legs fully extended.

Tools used:

The use of body weight only.

Performance description:

Laboratory and his hand behind his head tangled with giving the signal to start the laboratory fully bend his legs and Mayorma with erection put the trunk, and counted the number of times the crease and the tide with exhausting effort.

Measure the strength of the muscles of the thighs front:

- The purpose of the measure:

- Measure the strength of the muscles of the thighs front.

- The tools used to implement the test:

- multi gym device.

- Description of the test:

Laboratory sits on the bench dedicated to measuring the multi gym device (front part) to sit down and put the two men bent puts feet on lifting levers and then lift the legs from the knee joint where the weight is placed on the lever according to the method of the test subject.

Measure the strength of the muscles of the back thighs:

- The purpose of the measure:

(Measure the strength of the muscles of the back thighs).

- The tools used to implement the test of multi gym device.

Description test:

Lie face down on a bench dedicated to measuring the multi gym drag back on the device multi gym lift lever mounted gravity from the rear of the top several times in accordance with the theme of the test method (Mohamed Hassanein, 1995: 46).

Therapeutic curriculum:

After the interview, which was conducted by researchers with the selection of specialists sports medicine and academics workers and therapists in the physical therapy field, and after informing them of the sources resulted in the use of exercises Correctional must for Aissahabha feeling pain or neither can the laboratory of performing any test, which is reflected on the results of that test or measurement For this work the researchers to develop a platform therapeutic never approach exercises rehabilitative purpose was to reduce the pain and inflammation, and the possibility of growth and activity of injured tissue to the extent can the laboratory of discharging his training first and second order does not make that severe injury and then be final does not allow the athlete to return to action for this researcher used a number of therapeutic means and identified according to the opinion of doctors and the type and severity of injury where identified casualties bruise muscle and tear muscular simple, medium, and the means as a blogger in below where experts identified four of the means used researcher from start treating the injury an hour and even start racing in the curriculum rehabilitative namely:

- Infrared (I.R).

- Cooling.

- Massage device (electric massage).

- Manual massage.

These methods have been developed in the curriculum and put timing as directed by doctors, as shown in Table (1) where the researcher explained the type of device used and the time and the number of units and unit time qualifying for people with treatment. Duration of the curriculum has been four weeks starting on 15/06/2014 until 07/15/2014 ranged therapeutic units of 4 units per week. As shown in Table (1).

Table 1: build the distribution of physical therapy and the number of treatment units and periods per week for the period therapeutic:

week	Means used type	Time therapy tool	full therapeutic units	Full therapeutic unit time	Number of sessions	Negative exercises
1-	IR + Manual Massage (with a negative superficial exercises) + (move the detailed working on the bone)	-20 -30d	4	15-30 min	6	Moving the joints that are working on movements
2-	Turasund + Massage Manual and mechanical + exercises positive	20min-3-min		15-60 min	6	Add 5 exercises cationic

The researcher took into consideration that precedes physical therapy doctor diagnose the type of injury and pain relief. With the rest of the injured part and submit it for the period (24-48 hours) and depending on the type and severity of injury. Rehabilitative approach:

Through the experience of being the authors Imarssonamlah training and inform them of the sources and expert opinions have been able to develop curriculum in the form of rehabilitation exercises are subject to the laws of sports medicine and sports science training curriculum implementation has rehabilitative dated 16/06/2014 until 07/16/2014 by four weeks, started in all four units a week, followed by qualifying on negative rest after every two units and thus the number of qualifying units (16) unit qualifying time of each unit (30) minutes and ranged between exercise intensity (30% -70%) of the viability of an infected person.

Results analyzed and discussed:

This section includes the results and analyzed and discussed, and the researcher presented the results analyzed and discussed according to the following:

3. RESULTS

Display, analyze and discuss the results of measuring the degree of pain:

Table 2: shows the mean and standard deviation value (T) in the tribal tests and a posteriori the sample in the measurement of the degree of pain

No	Variables	Pretest		Posttest		Mg f	Mg h2 f	T*	Significance
		C	A	C	A				
1	Measure the degree of pain	4.330	1.87	1.20	0.72	4.00	2.293	17.162	moral

* Value (t) of tabular (2.201) under the level of significance (0.05) and the degree of freedom (7).

Display, analyze and discuss the results Mtaulp power in legs:

Table 3 shows the mean and standard deviation value (T) in the tribal tests and a posteriori the research sample to test the degree of strength in legs.

No	Variables	Pretest		Posttest		Mg f	Mg h2 f	T*	Significance
		C	A	C	A				
1	The degree of strength in legs	26.666	1.749	33.13	2.622	7.030	2.293	17.162	moral

* Value (t) of tabular (2.293) under the level of significance (0.05) and the degree of freedom (7).

Display, analyze and discuss the results of the front femoris muscle strength:

Table 4 shows the mean and standard deviation value (T) in the tribal tests and a posteriori the research sample in front of thigh muscle strength.

No	Variables	Pretest		Posttest		Mg f	Mg h2 f	T*	Significance
		C	A	C	A				
1	Femoris muscle strength headlights	5.066	1.061	12.966	3.074	6.310	0.573	6.707	Moral

* Value (t) of tabular (2.201) under the level of significance (0.05) and the degree of freedom (11)

Display, analyze and discuss the results of muscle strength femoral background:

Table 5: shows the mean and standard deviation value (T) in the tribal tests and a posteriori the sample in the background femoris muscle strength.

No	Variables	Pretest		Posttest		Mg f	Mg h2 f	T*	Significance
		C	A	C	A				
1	Femoris muscle strength background	6.720	3.241	12.090	1.015	-6.25	0.652	8.174	moral

* Value (v) of tabular (2.201) under the level of significance (0.05) and the degree of freedom (7)

Discussion of Results

Through the search results and by reference to the table (2), we find significant differences in favor of the post-test in the degree of pain and attribute the researcher reason to therapeutic program as strengthen the muscles working through the use of his position exercises her do it on the surrounding leg ligaments by strengthening the muscles that have a direct impact in pulling the affected

ligaments and develop the strength of the muscles, which in turn increases the strength of the ligaments to enhance the stability of the muscles of lower limb

Infected, which is largely under pressure resulting from loads the training. Where the curriculum began to ease and use compresses cooling for 48 hours, three times a day then continued therapeutic approach through therapeutic means (infrared -waltraznd massage mechanical and manual), where the researcher used the program preventive treatment in order to restore the body to its natural state or are close to the body work of the ordinary as well as the renewal of the functional status of a member of the victim and here will these exercises on the "quick and easy entry into nerve signals by increasing the signal strength of the nervous" (Gustavsen, R; trouningther, 1985) this reduces the chance of reducing the pain and bring research hypothesis argument there therapeutic effect means selected according to the therapeutic approach to the research sample in tests posteriori.

Going back to the table (3), we find we find significant differences for post-test in the degree of strength in legs

Since the training vocabulary adopted by the researcher, caught up with the scientific basis used to determine the intensity required to develop muscle strength aggregates responsible for the performance of the basic duty motor, which led to an improvement in the degree of prescription strength to the muscles of the two men. Some studies have indicated that the development of Mtaulp muscle strength of the muscles working on the joints but reflect the strength of the ligaments that surround Bamufsal himself. (Rolf Wirhed, 1984: 67)

So Differences that emerged in these indicators for the post test a clear indication has shown the effectiveness of the exercises used in the qualifying program in the evolution of the degree of the relative strength of the muscles of the two men. These results have made the other part of the goal of imposing Find drafted researcher with regard to the special physical variables force.

Given the table (4), we find we find significant differences for post-test in front of thigh muscle strength

Researcher attribute reason, however, that the use of physical exercise rehabilitation, which is built on the basis of the gradient of negative action to affirmative action any work performance, and here each of Osama Riad consistent and in front of Hassan stellar and Ayoub and Ibrahim visual that "therapeutic exercises qualifying negative ones and positive is the most important natural branches treatment which are used in the treatment of injuries and then the evolution of the muscle towards increasing the bear "(Wadih Yassin, Yassin Taha, 1986) touched on the quality of the muscle by knowing the extent of what you can carry, or the degree of endurance them as well as how much they accomplish the job" (in front of Hassan stellar, Osama Riad 0.1998 any portion systolic which leads to inflation and increase the reserves of energy and materials in this muscle get the most as a result of the dynamic work.

Second, and produces an increase in fibrous membrane size in this case will reflect this increased the size of the elements responsible for the contraction of it is training to increase the maximum power and power will inevitably increase muscle size or enlarged muscle, but taking into account the performance time where most trainers reliable to develop strength muscle and then increase the inflation figure muscular output and the time it takes to accomplish (Job Ibrahim, Ibrahim Basri, 1992)

That the use of exercise training in a manner therapeutic science has helped in effect exercise towards increasing the work of the motor operating units and for adaptation nervous in the rotation of the muscle fibers do a developing nervous compatibility direction, which achieved Ttaiwirdrjh power level, especially since the researcher used the ring training method that has affected the level of tender The research sample and enhances it mentioned (Wadih Yassin and Yassin Taha) that the "circuit training aims to fitness, especially the elements of power and the degree of strength, flexibility and agility" build any would this work flow of blood newcomer tissues working where mentions Osama al-Tai for (Peterson, and Rnstrom) that "muscle processed about 15% of gross tribal at rest while preparing b (72%) of the gross tribal during muscular work" (Joshua Haitham, 2002).

For the purpose of moral knowledge differences between pre and post tests of muscle strength femoral background, the researcher using the test (T. test) for the corresponding samples, as shown in the table (5). We find that the player injured was a need "to increase the intensity and the amount of the job done for the development of maximum power with emphasis on the importance of the size of the resistance used and attention mighty point impact and direction and the amount of tensile longitudinal muscle as well as the contact point tendon and its relationship with Arthritis" (Resan Kahriht glorious 0.1991) and has thus achieved Find all targets.

4. CONCLUSION

1. The Qualifying Program prepared developed muscle strength of the muscle groups working on the muscles of the lower limb of the basketball players (youth)
2. No statistically significant differences between tribal and dimensional tests for the research sample of indicators for reducing the degree of pain
3. No statistically significant differences between tribal and dimensional tests for the research sample of indicators for the development of strength to the muscles of the two men.
4. No statistically significant differences between tribal and dimensional tests for the research sample of indicators for the development of muscle strength femoral front
5. The existence of significant differences between tribal and dimensional tests for the research sample of indicators for the development of femoral back muscle strength.
6. Exercise contributed to the severity and frequency and the number of sessions in the muscles ready to withstand voltage after muscle injury.

5. REFERENCES

1. In front of Hassan stellar, Osama kindergarten; sports medicine and physical therapy: Cairo, book publishing center, 1998
2. - Inam carpenter; a proposal to rehabilitate the muscles of the trunk program after acute spinal injuries, Master Thesis, Faculty of Physical Education, University of Baghdad 0.1996.
3. - Ayub Ibrahim, Ibrahim al-Basri; articular and muscular football: Baghdad injuries, Dar Al-Mansour for publication and distribution 0.1992.
4. - Abul-Ela, Mr. Abdo; the role of the coach and the player in sports injuries: prevention and treatment, Youth University for printing and publishing and distribution Foundation, Alexandria, 1984
5. - Rushdie Fattouh Abdel-Fattah; The basics of science in general Afassiologih (Cairo, Dar chains 0.1998)
6. - Smiep Khalil Mohammed; Sports therapeutic, Baghdad, Dar al-Hikma Press, 1990
7. - Mufti Ibrahim; Alndreb sports talk, i 1 (Cairo, Dar Alvkr 1998)
8. - Wadih Salman, Nashwan yolk; Sports injuries suffered by the Physical Education students at the University of Mosul, Iraq Alaadih Journal of Science, Vol. IV, No. X, (Mosul University, 1998)
9. Hassan Alnoasrh; Injuries ankle ligament rupture in their relationship and in some physical measurements and anatomical foot, scientific studies of the Fifth Conference of Physical Education, Research, (Egypt, Helwan University, Faculty of Physical Education).
10. - Mukhtar Salem; Sport injuries, i 1, (Riyadh, Reich Publishing House, 1987),
11. Match is required; Back pain and neck and back and sweat Alency, (small encyclopedia, number (298), Iraq, House of Cultural Affairs, 1988)
12. - Ammar bottomed; Sports Medicine, (Mosul, National Library for printing and publishing 0.1999.
13. - A. Parham; muscle injuries (Olympic Committee, Federation of Sports Medicine, 1993)
14. - Mukhtar Salem; Sport injuries, i 1, (Riyadh, Reich House Publishing, 1987).
15. - Ahmed Mohammed Abdul Khaliq; the impact of a proposed curriculum for the treatment of lower back pain by strengthening the muscles of the thighs, Master Thesis, Faculty of Physical Education, University of Baghdad 0.2004.
16. - Haitham Joshua; Technology rehabilitation program according to some biomechanical indicators for the rehabilitation of injured partial tear of the lateral ligament and the medial in the knee joint, PhD thesis: University of Baghdad, College of Physical Education 0.2005.
17. - Wadih Yassin, Taha Yassin; physical development of women: Mosul University, National Library for Printing and Publishing, 1986.
18. Mohamed Sobhi Hassanein; Measurement and Evaluation in Sports and Physical Education, vol. 1, 3rd Floor, (Cairo, Dar Al Arab Thought 0.1995).
19. Larry, F, Ellison: Basketball Injures in the database of the Canadian
20. hospitals injury reporting and prevention program (CHIRPP), chronic Diseases in Canada, (1995) ,
21. Dorothy. , Marjorie; Proprioceptive neuromuseular copy right. Co, 3rd , 1985
22. Abbott H.G. and kress g. Archires of Physical medicine and Rehabilitation, New York University , 1999.
23. . Gustavsen, R; trouningther ; cstuttgatt, new york time, inc, 1985 .

6. APPENDAGES

1: training curriculum

week	Number of units	Intensity	Repetition	Rest between iterations	Totals	Rest between aggregates
First	3	40%	10	2 min	3	4 min
Second	3	55%	10	2 min	3	4 min
Third	3	65%	10	2 min	3	4 min
fourth	3	75%	-1	2 min	3	4 min

Notes training curriculum:

1. Repetitions in the first week (15) and the number of aggregates 4.
2. Repetition in the second week (15) and the number of aggregates 4. Thus, for the rest of weeks.
3. Intensity begin with (40%) and ending with (80%) as sources indicate.
4. Rest period cured up to a period of 6-7 minutes is very adequate for the youth players.
5. Intensity in the first week and the second 40%.

Unity qualifying model

Illustrates the physical attributes to be measured and the proposed tests

Correctional units divided weeks

First week:

Time: 45 minutes

Part prep: 10 minutes

The main part: 35 minutes

Final part: 5 minutes

week	Exercises used	Time	Intensity	Repetition	Rest between iterations	totals	Rest between aggregates
first	<ul style="list-style-type: none"> - Lying on the back with the lifting of the two men in tight alternately to the top and bottom 2. Lie on your back with legs alternately lifted and rotated to the right and the left. 3. Lie on your back with legs alternately lifted and rotated to the right and the left, writing for the number (5). 4. Lie on your back with legs alternately lift to the top. 5. sit on the bench with the lifting of the two men together, a fully outstretched. 	90 sec	40%	3*15	2 min	3	4-4 min

Address for correspondence

Authors: Mohammed Mutlaq Badr Al-Saadi Mustansiriya University / College of Physical Education

E-mail address: mblam2002@yahoo.com

Second Authors : Shehab Ahmed Hammoud Diyala University College of Physical Education

E-mail address: diyala2015sport@gmail.com