International Research Journal of Education and Technology (IRJEdT)
‖ ISSN: 2581-7795, Impact Factor 5.007 ‖
‖ Peer-Reviewed | Open Access | International Journal ‖
‖ Volume: 06 | Issue: 12 | Dec- 2023 | www.irjweb.com ‖

Effect of Weight Training Exercises for the development of Leg Explosive Power among Kabaddi Players of Khammam District

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Abstract:

The Purpose of the study is to determine the effect of weight Training exercises for development of Leg Explosive Power among Male Kabaddi Players of Khammam District between the age group of 18 to 25 Years.. The sample for the present study consists of 30 Male Kabaddi Players of Khammam District out of which 15 are experimental group and 15 are controlled group. Weight training exercises such as biceps curls, bench press, front press, back press, Upright Rowing etc. were given to experimental group on alternate days i.e. three sessions per week along with the general training of Kabaddi for twelve weeks and controlled group were given the general training for twelve weeks..To assess the Leg Explosive Power the Standing Broad Jump Test were used in the Pre Test and Post Test of the Study. This study shows that the Experiment Group of Kabaddi increase the Leg Explosive Power compare to the control group. Key words: Weight Training, Kabaddi, upper body muscle strength and endurance etc

Introduction:

Weight training exercises can improve speed and endurance by using weights. Weight training exercises increases the intensity of training and builds strength because of the resistance they offer when training. Weight training will strengthen the muscle as well as and will boost the player's power and is ideal for all players and other athletes who depend on high speed running. To reduce the possibility of injury systematic weight training should be conducted once to the player has a good solid base of strength and endurance.

Weight Training offers the following benefits.

a). Helps develop power and muscle elasticity.

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b). Improves stride frequency and length.

c). Develops co-ordination, encouraging the proper use of arm action during the batting phase and feet in Support phase.

d). Develops control and stabilization as well as improves speed

e). Promotes strength endurance.

f).Develop maximum speed and strength.

g).Improves lactate tolerance.

P.Mahendiran & Dr.A.Chandramohan (2020) Studied the effect of plyometric training and functional core strength training on explosive power among kabaddi players. To achieve the purpose of the present study, forty five male kabaddi players from Affiliated Colleges of Bharathidasan University, Tiruchirappalli, Tamilnadu, India were selected as subjects at random and their ages ranged from 18 to 25 years. The subjects were divided into three equal groups of fifteen each. Experimental Group I was exposed to plyometric training, Experimental Group II was exposed to functional core strength training and control group underwent no training. The duration of experimental period was 12 weeks. The pre test and post test scores were subjected to statistical analysis using Analysis of Covariance (ANCOVA) to find out the significance among the mean differences, whenever the 'F' ratio for adjusted test was found to be significant, Scheffe's post hoc test was used. In all cases 0.05 level of significance was fixed to test hypotheses. The plyometric training and functional core strength training had shown significant improvement on explosive power of male kabaddi players.

Rajesh Kumar and Erika Zemková (2022) studied the Effect of 12-Week Core Strengthening and Weight Training on Muscle Strength, Endurance and Flexibility in School-Aged Athletes. Ninety male athletes at the age of 12 were randomly divided into three equal groups (30 in each). Group 1 underwent core strengthening training, group 2 underwent weight training, and group 3 was the control. The training was for 12 weeks, with three sessions per week (one hour per session). Prior to and after the training, abdominal strength, endurance, and flexibility were evaluated using the sit-ups test, the Cooper 12 min run test and the sit and reach test. The analysis of variance was used to analyze pre- and post-intervention data. The results showed that both the core strength training group and the weight training group significantly ($p = 0.00$) improved in ab dominal strength, represented by the number of sit-ups (from 18.70 3.20 to 22.21 3.50 and from 17.60 3.29 to 21.60 3.63, respectively); endurance, represented

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by distance covered in 12 min(from1817 185.78 mto2008.97 214.79 mandfrom1806 237.25 mto2002.59 83.32 m, respectively); and flexibility, represented by the sit and reach distance (from 23.48 2.75 cm to 25.96 2.38 cm and from 23.66 2.92cm to 25.86 2.55cm, respectively) when compared to the control group (from 17.20 3.20 to 16.39 2.69; from 1813 224.69 m to 1778.15 05.28 m; from 23.46 3.06 cm to 21.76 2.56 cm). More specifically, abdominal strength and endurance improved slightly more in the weight training group than in the core strength training group, whilst flexibility increased slightly more in the core strength training group than in the weight training group. These findings indicate that both core strengthening training and weight training are effective in improving physical fitness in school-aged athletes; however, the improvement is to differing extents regarding their endurance, flexibility, and abdominal strength.

G.R. Vadivel, Maniazhagu Dharuman (2022) studied the Effects of Circuit Training and Circuit Weight Training on Muscular Strength Endurance.The Purpose of the present study was to find out the effects of circuit training and circuit weight training on Muscular strength endurance. To achieve this purpose, thirty men kabaddi players from Alagappa University College of physical education, karaikudi, were randomly selected as subjects. The age of the subjects ranged between 21 to 28 years. The selected subjects were divided into three groups of ten subjects each. The experimental group-1(n=10 CT) underwent circuit training, the experimental group-2 (n = 10 CWT) underwent circuit weight training and control group-3 (n= 10, CG) did not participate in any special training programme apart from their regular activities. The data was collected at prior to and after the training programme of nine weeks. Muscular strength endurance was chosen as a criterion variable. The analysis of co variance (ANCOVA) was used to analyze the data. The results of the study showed that the Muscular strength endurance was significantly improved due to the circuit and circuit weight training.

Purpose of the Study.

The Purpose of the study is to determine the effect of weight Training exercises for development of Leg Explosive Power among Male Kabaddi Players of Khammam District between the age group of 18 to 25 Years..

Methodology:

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The following strength exercises are used for training the Experimental group:

1. Front Press	2. Biceps Curl	3. Bench Press
4. Lateral Raise	5. Up right rowing	6. Normal Fly
7. Shoulder Press	8. Half Squat	9. Front Raise lunge
10. Heel Raise	11. Squat Jumps	12. Dumbell Sideward bend

Result and Discussion:

Table I showing the Pull ups Test of Experimental Group in Pre and Post Test for Leg Explosive Power mong Kabaddi Players

Pull ups	N	Pre Test	Post Test
Experimental	15	164	186
Control	15	164	165

The Experimental Group Pre Test Mean Score in Standing Broad Jump is 164 compare to post Test Score is 186 there is a improvement of mean score between Pre Test to Post Test due to Weight Training. The Control Pre Test Mean Score in Standing Broad Jump is 164 compare to post Test Score is 165 between Pre Test to Post Test due to General Training. The results of the study shows that the Experimental group of Kabaddi Players had improve in Leg Explosive Power due to the Weight Training.

Conclusions;

This study shows that the Experiment Group of Kabaddi increase the Leg Explosive Power compare to the control group.Weight training significantly improves leg Explosive Power in Kabaddi players. Structured resistance exercises allow players to execute essential sport fundamentals such as forceful raiding, tackling, and defending against group attacks.

Recommendations:

Similar Studies will be conducted on other sports and Games. This study is useful for coaches in Kabaddi.

References:

G.R. Vadivel, Maniazhagu Dharuman (2022) studied the Effects of Circuit Training and Circuit Weight Training on Muscular Strength Endurance.March 2022Journal of Advances in Sports and Physical Education 5(3):38-42DOI: 10.36348/jaspe.2022.v05i03.001

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Prof. Rajesh Kumar and Prof. Erika Zemkova, *Appl. Sci.* **2022**, The Effect of 12 Week Core Strengthening and Weight Training on Muscle Strength, Endurance and Flexibility in School Aged Athletes – P*12*(24), 12550; **https://doi.org/10.3390/app122412550** indexed within **Scopus**, **SCIE (Web of Science)**, **Inspec**, **CAPlus / SciFinder**, and **other databases**. Q2 (*Engineering, Multidisciplinary*) / CiteScore - Q2 (General *Engineering*) **Impact Factor:** 2.838 (2021); 5-Year Impact Factor: 2.921 (2021) **ISSN: 2076-3417**