

Effect of Resistance Training on Shoulder Strength and Arm Explosive Power of Football Players

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ABSTRACT

Throw-In limits the use of hands in game play. The throw-in can be a valuable weapon in a team's plan of attack. A powerful throw can propel the ball from the touchline to the center of the field, up the sideline, or in front of the goal. The aim of this paper was to examine the effect of resistance training on shoulder strength and arm explosive power of inter collegiate football players. For this study 60 inter collegiate men football players from Coimbatore district were selected using purposive random sampling technique. The age of the subjects ranges between 19 - 23 years. The pre test was conducted on the selected performance related variables and after completion of pre test the subjects were randomly assigned into two groups equally so that each group has 30 subjects. The first group was named as the resistance training group (RTG) subjects were treated with Resistance training and the second group was control group did not undergo any specific training other than daily routine. The training period was scheduled for 6 weeks. After 6 weeks of the training period post test was conducted on the dependent variables for both groups. To analyse the treatment effect of pre and post test training 't' ratio was used. The resistance training group (RTG) was significantly improved ($P < 0.05$) the selected performance related variables of shoulder strength and arm explosive power. The experimental group (RTG) was better than the control group. Overall, it was concluded that the effect of resistance training might have been the source of its dominance on the improvement of shoulder strength and arm explosive power of inter collegiate men football players.

Keywords - resistance training, shoulder strength, arm explosive power, inter collegiate men football players..

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I. INTRODUCTION

"Football is a game which calls for demanding, consistent exciting activity and attracts the adolescent the world over. There is a distinction, which gives a specialty to football compared to that of other games. It is the natural behavior of human beings to use their hands and arms for doing almost all activities. In all other games, hands are dominantly used. But in football, the use of hand has been restricted which is only used for throw in and all other parts of the body are allowed to play, especially to use the foot. The important motor fitness components are speed, strength, endurance, power, agility, flexibility and etc. Executing the Throw-In limits the use of hands in game play. The throw-in can be a valuable weapon in a team's plan of attack. A powerful throw can propel the ball from the touchline to the center of the field, up the sideline, or in front of the goal. Resistance training is a form of exercise for the development of strength and size of skeletal muscles. Resistance training produces increased strength, superior movement

performance and general fitness, including enhanced function of the respiratory, cardiac and metabolic systems [1-4]. Other improvements include an increase in muscle mass, strengthening of connective tissue and supportive tissue as well as improvements in posture and physique. The good thing with resistance exercise is that you are actually using the very simple concept of just employing your own weight along with gravity to challenge and then train your body for the most per resistance exercise tone your body and make certain that you become leaner in your frame [5, 6].

II. METHODS

To achieve the present study 60 inter collegiate men football players from Coimbatore district were selected using purposive random sampling technique. The age of the subjects ranges between 19 - 23 years. The pre test were conducted on the performance related variables such as shoulder strength – 1 RM Test and arm explosive power – Medicine Ball Throw. After completion of pre test the subjects were randomly assigned into

two groups equally so that each group has 30 subjects. The first group was termed as the Resistance training group (RTG) subjects were treated with Resistance training and the second group was control group did not undergo any specific training other than the regular work. The post test for both groups on dependent variables was conducted after 6 weeks (3 days a week). To analyse the treatment effect of pre and post test training 't' ratio was used.

selected skill related fitness variables (Shoulder strength and arm explosive power).

TRAINING PROGRAMME

Total duration of the training program is 6 weeks (4 days a week – 1 session a day) and 1 hour 45 min of each session including warm up & warm down.

WEEK 1 & 2						
S.No	EXERCISE	REP	REP REST	SET	SET REST	TOTAL TIME
1.	Wall Throws	30	60	3	90	660
2.	Single Leg Chop	5	60	3	90	660
3.	Medicine Ball Crunch	10	60	3	90	810
4.	Plank Ups	30	60	3	90	570

WEEK 3 & 4						
S.No	EXERCISE	REP	REP REST	SET	SET REST	TOTAL TIME
1.	One step wall throw	30	60	3	90	660
2.	Diagonal Chop	30	60	3	90	660
3.	Push-Ups	20	60	3	90	810
4.	Renegade Rows	4	60	3	90	570

WEEK 5 & 6						
S.No	EXERCISE	REP	REP REST	SET	SET REST	TOTAL TIME
1.	Over the Back Toss	30	60	3	90	660
2.	One Arm Crunch	30	60	3	90	660
3.	Bent-Over Rows	20	60	3	90	810
4.	Down Dog to Plank	4	60	3	90	570

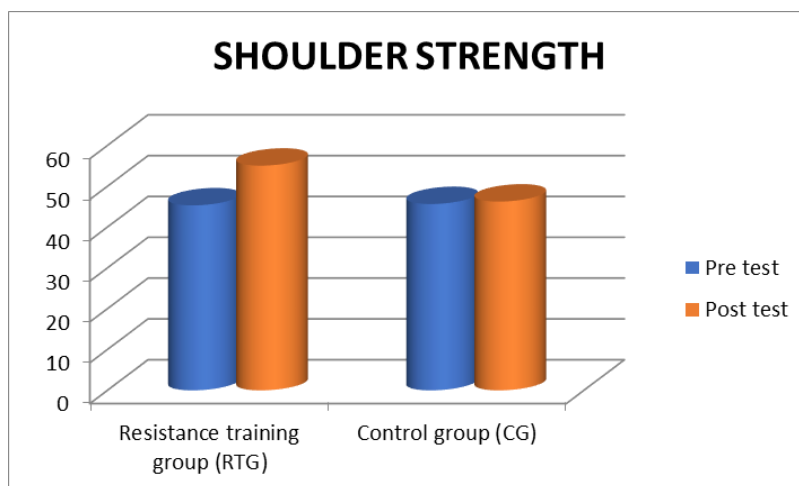
III. RESULTS

To find out if any significant difference exists between pre and post training, t-ratio was applied. This study confirms that Resistance training had produced improvements (P<0.05) the

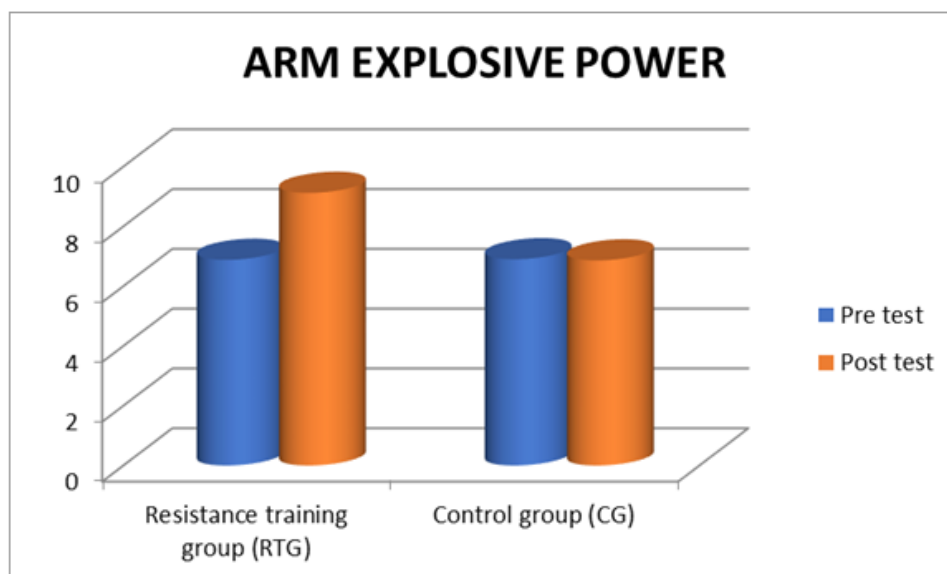
whereas control group did not show any improvements on selected variables. The experimental group (RTG) was better than the control group.

TABLE SHOWING OBTAINED MEAN VALUES FOR THE SELECTED VARIABLES						
S.No	Variables	Group	Pre test	Post test	SEM	T ratio
1	Shoulder strength	Resistance training group (RTG)	45.33	55.06	1.652	14.63*
		Control group (CG)	45.66	46.26	1.525	0.396
2	Arm explosive power	Resistance training group (RTG)	6.88	9.12	0.154	21.79*
		Control group (CG)	6.90	6.86	0.127	0.546

THE PRE AND POST TEST MEAN DIFFERENCE OF SHOULDER STRENGTH IN EXPERIMENTAL GROUP AND CONTROL GROUP



THE PRE AND POST TEST MEAN DIFFERENCE OF ARM EXPLOSIV POWER IN EXPERIMENTAL GROUP AND CONTROL GROUP



IV. DISCUSSION AND CONCLUSION

Resistance training (weight preparing or weight lifting) is the method of applying resistance from to muscles to invigorate development (hypertrophy) to the muscles of the muscle filaments and increment circulation to them. Being strong gives you a sense of empowerment. It means that you can be more independent and self-reliant. Doing upper body exercise will increase the muscle tone and presence of this entire region, just as upgrade your posture and bearing. Based on the findings and within the limitation of the study it was noticed that resistance training helped to improve the shoulder strength of intercollegiate football players. Thus it is concluded that Resistance training plays a vital role in developing upper extremity of football players which is least focused. Both upper extremity and lower extremity should be equally strong and powerful for better overall playing ability.

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