



EFFECTS OF CIRCUIT RESISTANCE TRAINING ON MUSCULAR STRENGTH ENDURANCE OF INTERCOLLEGIATE LEVEL WEIGHT LIFTERS, POWER LIFTERS AND BODY BUILDERS

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Abstract

The purpose of this study was to examine muscular strength endurance of intercollegiate male weight lifters, power lifters and body builders. To achieve this purpose eighty healthy male students were randomly selected from R.V.G Engineering college, Mysore, Karnataka. They were divided in to four equal groups. The first group underwent circuit training with weight lifters, the seconds group with power lifters and the third group with body builders and final group did not underwent any specific training. Muscular strength endurance was selected as dependent and it was estimated by modified sit up test. Experimental groups underwent low-volume circuit resistance exercise with slow movement: 35 % of one-repetition maximum (1-RM) and 4 s each of lifting and lowering phases.

Keywords: Low volume Circuit Resistance Training, Control Group, Muscular Strength Endurance, weight lifters, power lifters and body builders.

INTRODUCTION

The reason for the investigation was to discover the impacts of circuit protection preparing program on solid quality continuance of purely university level weight lifters, control lifters and muscle heads.

METHODOLOGY

The purpose of the present study eighty male weight lifters, power lifters, body builders were randomly selected from R.V.G Engineering college, Mysore, Karnataka. They were divided in to four equal groups. The first group underwent circuit training with weight lifters, the seconds group with power lifters and the third group with body builders and final group did not underwent any specific training. Muscular strength endurance was selected as dependent and it was estimated by modified sit up test. The specialist did not

make any endeavor to compare the gatherings in this examination. The chose eighty subjects were partitioned into four equivalent gatherings, for example, Experimental Group I (n = 15) underwent circuit training with weight lifters, Experimental Group II (n = 15) underwent circuit training with power lifters. Experimental Group III (n = 15) underwent circuit training with body builders and last group was control group (n =15). They did not experienced a particular preparing. The subjects were allowed to pull back their assent if there should arise an occurrence of feeling any distress amid the time of their cooperation however there was no dropout amid the investigation. To find the mean difference from the pre test to post test 't' ratio was used and to find out the mean difference among the group analysis of co variance was applied at 0.05 level of confidence.

RESULT OF THE STUDY

TABLE -1
PRE TEST TO POST TEST MEAN DIFFERENCE OF WEIGHT LIFTERS ON MUSCULAR STRENGTH ENDURANCE

Variables	Test	Mean± S. D	S.E.M	M.D	't' ratio
Muscular Strength endurance (in numbers)	PRE-TEST	36.53±3.04	0.79	4.33	14.28*
	POST-TEST	40.86±3.06	0.79		

0.05 level of Significance (2.09)

The Table showed the obtained t ratio 14.28 was higher than the table value of 2.09 and it shows

significant improvement from pre test to post Test of weight lifters on muscular strength endurance.

TABLE 2
PRE TEST TO POST TEST MEAN DIFFERENCE OF POWER LIFTERS ON MUSCULAR STRENGTH ENDURANCE

Variables	TEST	Mean± S. D	S.E.M	M.D	't' ratio
Muscular Strength endurance (in numbers)	PRE-TEST	36.66± 3.06	0.79	3.73	15.04*
	POST-TEST	40.40± 3.50	0.90		

0.05 level of Significance (2.09)

The Table showed the obtained t ratio 15.04 was higher than the table value of 2.09 and it shows

significant improvement from pre test to post Test of power lifters on muscular strength endurance.

TABLE 3
PRE TEST TO POST TEST MEAN DIFFERENCE OF BODY BUILDERS ON MUSCULAR STRENGTH ENDURANCE

Variables	Test	Mean± S. D	S.E.M	M.D	't' ratio
Muscular Strength endurance (in numbers)	PRE-TEST	36.46± 3.60	.93	5.40	22.97*
	POST-TEST	41.86± 3.79	.98		

0.05 level of Significance (2.09)

The Table showed the obtained t ratio 22.97 was higher than the table value of 2.09 and it shows

significant improvement from pre test to post Test of body builders on muscular strength endurance.

TABLE 4
PRE TEST TO POST TEST MEAN DIFFERENCE OF CONTROL GROUP ON MUSCULAR STRENGTH ENDURANCE

Variables	Test	Mean± S. D	S.E.M	M.D	't' ratio
Muscular Strength endurance (in numbers)	PRE-TEST	37.13± 3.09	.79	-.5333	1.658
	POST-TEST	37.66± 2.79	.72		

sThe Table Shows The Mean Values Of Pre, Post And Adjusted Post Test Of CRTFWL, CRTFPL,

CRTFBB And Control Group On Muscular Strength Endurance.

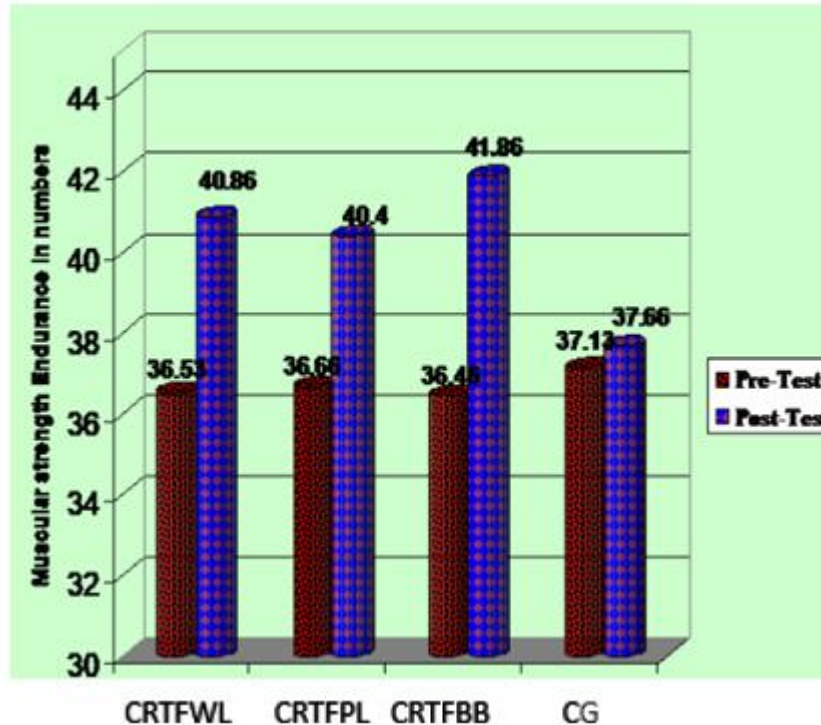


TABLE 5
ANALYSIS OF VARIANCE ON PRE TEST MEAN AMONG CRTFWL, CRTFPL, CRTFBB AND CONTROL GROUP ON MUSCULAR STRENGTH ENDURANCE

Mean	CRTFWL	CRTFPL	CRTFBB	CG	Source of variance	Sum of square	df	Mean square	'f'
Pre-test	36.53	36.66	36.46	37.13	B.G	4.067	3	1.356	0.13
					W.G	576.53	56	10.295	
Post-test	40.86	40.40	41.86	37.66	B.G	145.20	3	48.400	4.41*
					W.G	614.40	56	10.971	
Adj. post test	41.02	40.43	42.09	37.24	B.G	194.69	3	64.898	54.69*
					W.G	65.266	55	1.187	

0.05 level of significance

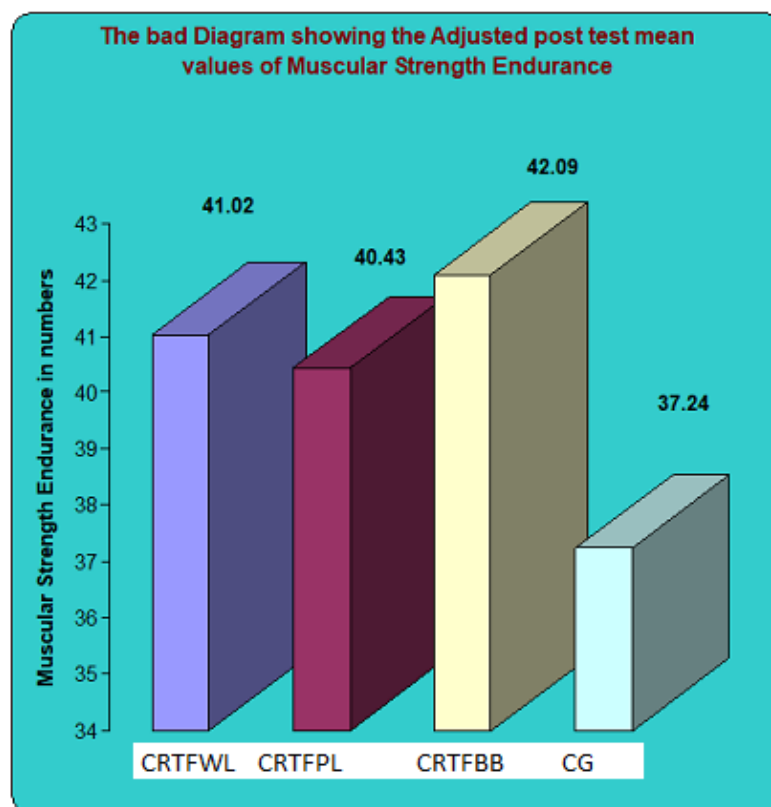
TABLE-6
THE SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN PARED MEANS ON MUSCULAR STRENGTH ENDURANCE

CRTFWL	CRTFPL	CRTFBB	CG	Mean Differences	Confidence Interval
41.02	40.43	-	-	0.59	1.12
41.02	-	42.09	-	1.07	1.12
41.02	-	-	37.24	3.78	1.12
-	40.43	42.09	-	1.66	1.12
-	40.43	-	37.24	3.16	1.12
-	-	42.09	37.24	4.85	1.12

* Significant at 0.05 level of confidence

Table 6 shows the post hoc analysis of obtained order adjusted post test means. The confidential interval mean difference required to be significant was 1.12. It was observed that the mean difference values of CRTFBB in developing the muscular strength endurance

was significantly higher than the CRTFPL, CRTFWL and control group. The CRTFWL developed the muscular strength endurance better than the CRTFPL and control group. The CRTFPL developed muscular strength endurance better than the control group.



RESULT

- It was revealed that circuit resistance significantly improved the muscular strength endurance for the intercollegiate level weight lifters.
- It was revealed that circuit resistance significantly improved the muscular strength endurance for the intercollegiate level power lifters.
- It was revealed that circuit resistance significantly improved the muscular strength endurance for the intercollegiate level body builders.
- It was revealed that circuit resistance body builders had better improvement than weight lifters, power lifters and control group of muscular strength endurance.
- It was revealed that circuit resistance weight lifters had better improvement than power lifters and control group of muscular strength endurance.
- It was revealed that circuit resistance power lifters had better improvement than control group of muscular strength endurance.

CONCLUSION

It is concluded that the body builder has better improvement due to the circuit resistance training of intercollegiate level players.

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