ORIGINAL RESEARCH PAPER

Volume-6 | Issue-9 | September-2017 | ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

EFFECT OF PROGRESSIVE, FLUCTUATED AND REGRESSIVE RESISTANCE TRAINING ON STRENGTH PERFORMANCE AMONG BHARATHIDASAN UNIVERSITY INTER COLLEGIATE MEN SOCCER PLAYERS

Physical Education

Dr. I. John Parthiban

Director of Physical Education, H.H The Rajah's College (Auto), Pudukkottai, Tamilnadu.

ABSTRACT

The aim of the study was designed to determine the effect of progressive, fluctuated and regressive resistance training on Strength performance among Bharathidasan University Inter Collegiate Men Soccer players. To attain the purpose, sixty (N=60) College men Soccer players from various affiliated colleges of Bharathidasan University, Tiruchirappalli, Tamilnadu, India were randomly selected as subjects. The subjects were assigned at random into four groups of fifteen each (n=15). Group-I underwent Progressive Resistance Training, Group-II underwent Fluctuated Resistance Training, Group-III underwent Regressive Resistance Training and Group-IV acted as Control. The dependent variable selected for this study was Strength and it was assessed by Push-ups tests. All the subjects were tested prior to and immediately after the training for the selected variable. Data were collected and statistically analyzed using ANCOVA. Scheffe's post hoc test was applied to determine the significant difference between the paired means. In all the cases 0.05 level of significance was fixed. The results of the study showed that there was a significant difference among all the Experimental groups' namely progressive resistance training, fluctuated resistance training and regressive resistance training. Further the results, showed progressive resistance training was found to be better than the fluctuated resistance training and regressive resistance training in Strength.

KEYWORDS

Progressive Training, Fluctuated Training Regressive Resistance Training, Strength

INTRODUCTION

Sports are the highest products of civilization and the most accessible, lived experimental sources of the civilizing spirit; Sport is as old as human society itself. It has been a part of civilized societies throughout history. It is an institution, which has its own traditions and values. Being an institutionalized and competitive activity, it involves vigorous physical exertion or the use of relatively complex physical skills by individuals. Their participation is motivated by a combination of intrinsic satisfaction associated with the activity itself and external rewards earned through participation. With the increasing competitiveness and rising standard in sports, the talent search has become important, as young talent needs to be spotted out at an early age and nurtured with the right kind of scientific training in order to get excellent performance if he has not been chosen for the sport at the right time.

The sports performance or any other type of human performance is not a product of one single system or aspect of human personality. On the contrary, it is the product of the total personality of the sports person. Sports training therefore, directly aims at improving the personality of sportspersons. No, wonder therefore sports training is an educational process.

Ever since sport began, athletes have been trying to get the most out of their training. However, it was not until the last few decades, that levels of sport performance have exhibited a spectacular increase. Records that once were imaginary can now be regular. At the same time, the amount of training of modern competitors is considerably higher than that used in the past. This would not be possible without the concurrent evolution in training methodology. The necessity of superior performances in competition has impelled coaches to introduce increasingly effective and sophisticated training methods.

Now a days, more and more individuals particularly boys and girls are affected by sports activities and increasing the number that are representing in the sports area. As preventive and curative health measures, it has become more successful throughout the world and, millions of teenagers should have chance of enjoying sports. Sport is the way which we use our physical capacities to play. Sports is an important in other ways, when one's body works better his mind works better, his brain and his body are interrelated. Sports allows you to blow of tension, to forget your problems for a while and to go out and have a good time no matter what other pressures one may be under in his life ***(Chandrakumar and Ramesh, 2015).***

Resistance training is an anaerobic form of exercise. This training programme can be used to enhance the ability of the body to perform at very high force and/or power outputs for a very short period of time to improve the ability of the body to perform repeated bouts of maximal activity ***(Thomas, 1994)***.

Resistance training is a method of improving muscular strength by gradually increasing the ability to resist force through the use of free weights, machines, or by using the person's own body weight. Strength training sessions are designed to impose increasingly greater resistance, which in turn stimulates development of muscle strength to meet the added demand ***(Robert, 1985).***

METHODOLOGY

The study was conducted on sixty (N=60) College men Soccer players from various affiliated colleges of Bharathidasan University, Tiruchirappalli, Tamilnadu, India were randomly selected as subjects. Subjects were randomly assigned equally into four groups. Group-I underwent Progressive Resistance Training, Group-II underwent Fluctuated Resistance Training, Group-III underwent Regressive Resistance Training and Group-IV acted as Control. The experimental groups underwent the respective training for a period of 12 weeks (3 days/week), whereas the control remain as normal with the sedentary life. Strength was selected as dependent variable and it was assessed by Push-ups test. All the four groups were tested on selected Strength was analyzed before and after the training period.

ANALYSIS OF THE DATA

The data collected from the experimental groups and control group on prior and after experimentation on selected variables were statistically examined by analysis of covariance (ANCOVA) was used to determine differences, if any among the adjusted post test means on selected criterion variables separately. Whenever they obtained f-ratio value was significant the Scheffe's test was applied as post hoc test to determine the paired mean differences, if any. In all the cases 0.05 level of significance was fixed.

The Analysis of covariance (ANCOVA) on Strength of Experimental Groups and Control group have been analyzed and presented in Table - 1.

Table – 1

Values of Analysis of Covariance for Experimental Groups and Control Group on Strength

Certain Variables	Adjusted Post test Means				Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
	Progressive Resistance Training Group	Fluctuated Resistance Training Group	Regressive Resistance Training Group	Control Group					

Strength	17.63	17.89	18.52	14.83	Between	119.20	3	39.73	32.33*
					Within	67.60	55	1.23	

Significant at.05 level of confidence
(The table value required for Significance at 0.05 level with df 3 and 55 is 2.77)

Table-1 shows that the adjusted post test mean value of Strength for Progressive Resistance Training group, Fluctuated Resistance Training group, Regressive Resistance Training group and Control group is 17.63, 17.89, 18.52 and 14.83 respectively. The obtained F-ratio of 32.33 for the adjusted post test mean is more than the table value of 2.77 for df 3 and 55 required for significance at 0.05 level of confidence. The results of the study indicate that there are significant differences among the adjusted post test means of experimental groups on the increase of Strength.

To determine which of the paired means had a significant difference, Scheffe's test was applied as Post hoc test and the results are presented in Table-2.

Table - 2
The Scheffe's test for the differences between the adjusted post tests paired means on Strength

Certain Variables	Adjusted Post test Means				Mean Difference	Confidence Interval
	Progressive Resistance Training Group	Fluctuated Resistance Training Group	Regressive Resistance Training Group	Control Group		
Strength	17.63	17.89			0.27	1.17
	17.63		18.52		0.89	1.17
	17.63			14.83	2.80*	1.17
		17.89	18.52		0.63	1.17
		17.89		14.83	3.06*	1.17
			18.52	14.83	3.69*	1.17

Significant at.05 level of confidence

Table-2 shows that the adjusted post test mean differences on Strength between progressive resistance training group and control group, fluctuated resistance training group and control group, regressive resistive training group and control group 2.80, 3.06 and 3.69 respectively and they are greater than the confidence interval value 1.17, which shows significant differences at 0.05 level of confidence.

Further the table-2 showed the adjusted post test mean differences on Strength between progressive resistance training group and fluctuated resistance training group, progressive resistance training group and regressive resistance training group, fluctuated resistance training group and control group are 0.27, 0.89 and 0.63, and this is lesser than the confidence interval value 1.17, which shows insignificant differences at 0.05 level of confidence.

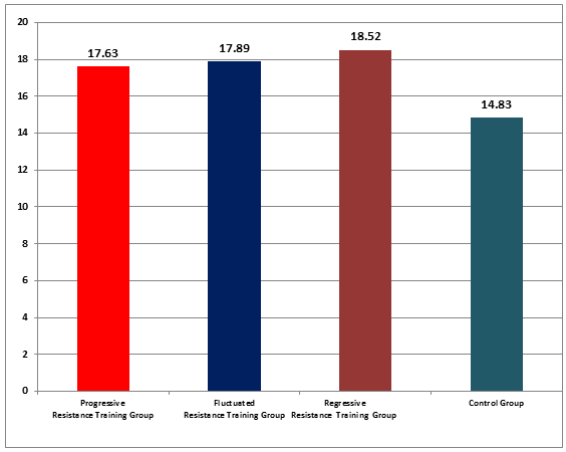
The results of the study further have revealed that there is a significant difference in Strength between the adjusted post test means of progressive resistance training group and control group, fluctuated resistance training group and control group, regressive resistive training group and control group. The values between progressive resistance training group and fluctuated resistance training group, progressive resistance training group and regressive resistance training group, fluctuated resistance training group and control group showed there is no significant difference.

However, the improvement in Strength was significantly higher for progressive resistance training group than other experimental groups.

It may be concluded that the progressive resistance training group has exhibited better than the other experimental groups in decreasing Strength.

The adjusted post test mean value of experimental groups on Strength was graphically represented in the Figure -1.

Figure-1
Bar Diagram on Ordered Adjusted Means of Strength (In Numbers)



CONCLUSION

From the analysis of the data, the following conclusions were drawn.

1. Significant differences in achievement were found between Progressive Resistance Training group, Fluctuated Resistance Training group, Regressive Resistance Training group and Control group in the selected criterion variable on Strength.
2. The Experimental groups namely, Progressive Resistance Training group, Fluctuated Resistance Training group, Regressive Resistance Training group and Control group had significantly decreased in Strength.
3. The Progressive Resistance Training group was found to be better than the Fluctuated Resistance Training group, Regressive Resistance Training group and Control group in decreasing Strength performance.

REFERENCES

1. Baechle Thomas R. (1994), "Essential of Straining Training and Conditioning" Champaign Illinois: Human Kinetics Publishers, p.319.
2. Chandrakumar.N, C Ramesh(2015), Effect of ladder drill and SAQ training on speed and agility among sports club badminton players, International Journal of Applied Research, 1(12): 527-529.
3. Robert, Hockey V. (1985), Physical Fitness the Pathway to Healthful Living, 5th Ed. Times Mirror/ Mosby College Publishing.