



## A COMPARATIVE EFFECT OF IN-SESSION CONCURRENT TRAINING ON EXPLOSIVE POWER OF UNIVERSITY AND COLLEGIATE FOOTBALL PLAYERS

K.P.MUBASSIR<sup>1</sup> & Dr. M.GOVINDARAJ<sup>2</sup>

<sup>1</sup>Research Scholar, Department of Physical Education, Karpagam Academy of Higher Education, Coimbatore, Tamilnadu, India.

<sup>2</sup>Faculty, Department of Physical Education, Karpagam Academy of Higher Education, Coimbatore, Tamilnadu, India.

### Abstract

*This exploration was bound with 30 subjects and fifteen college, fifteen university level football players were haphazardly chosen at the time of study. In-session preparing period to screen the promising curious impacts of simultaneous and vitality preparing molding on touchy power level. Every one of the subjects performed concurrent training on explosive power and, additionally, on earlier and amid the preparation time frame. The trial assemble fundamentally enhanced with vertical hop test for college football players presentation world – style foot ball, both of which require a high level of hazardous energy of effective rivalry. In spite of the fact that quality and power might be effectively and naturally created amid off-and presession preparing periods, there was same contradiction and power could be kept up amid the long in-session playing periods, particularly when measure of vitality framework vigorous and anaerobic molding or extensive group hones were performed. It was exhibited that an intense reduction in oxygen consuming limit and anaerobic power torque happened when simultaneous high-impact and protection preparing was gone through before by round of 30 minutes of blended simultaneous vigorous and protection molding. College players were all the more better than the university players.*

**Keywords:** Concurrent Training, Explosive Power, University, Football Players.

### INTRODUCTION

Simultaneous preparing alludes to an instructional course or program that incorporates some type of "continuance" exercise and "protection" work out. For all intents and purposes, when somebody notices simultaneous preparing, they are, by and large, alluding to the mix of lifting weights and cycling, paddling, swimming, or running all the time, and inside a similar instructional course, around the same time, or inside a similar preparing program. The points of interest that go into arranging a simultaneous preparing plan turn out to be more important when particular programming procedures are considered in particular situations, especially when the level of obstruction between two modes is a worry. Endeavoring to adjust cardio and quality preparing is nothing new. Truth be told, history discloses to us that one of the primary formal contentions in practice science in America was identified with this very subject. Further, I'm certain a large number of thoughts you have talked about this point in any event once with preparing accomplices, companions, or enemies preceding perusing this article. I've presently been a piece of thoughts or caught warmed trades in classrooms and weight rooms throughout the years relating to this point. In this way, is simultaneous preparing awful for a football players? Logical research recommend with respect to the impacts of simultaneous preparing on skeletal muscle development or enhancing quality. Intense exercise: dreary or ceaseless physical exercise principally including weight alone and gravity as protection using mostly oxygen consuming digestion

to finish a foreordained measure of work. Protection preparing: physical preparing including the development of outer loads through space with foreordained development designs to build or keeping up bulk, enhancing quality, or upgrading power. Dr. Hickson portrayed the plan of the quality preparing as "only to build leg quality." Sessions fundamentally included arrangements of 5 reiterations in the "parallel squat" (5 x 5), "knee augmentations" (3 x 5), and "knee flexions" (3 x 5). It is expressed that deadlifts were likewise performed, alongside sit-ups, yet it is indistinct in what set-rep way and at what force.

### METHODOLOGY

Thirty college and university male football players volunteered to partake in this examination. The subjects were arbitrarily separated into two equivalent groups in particular college group and university group. The subjects were chosen from Kannur university players. The subjects were (N = 15:) aged 17-25 years. None of the subjects had preparing background utilizing simultaneous preparing program before this investigation. The subjects got all the essential data about the examination's technique in oral and composed frame.

### EXPERIMENTAL DESIGN

Thirty foot athletes were haphazardly divided into the college players Group I (UNI), Collegiate gathering II (COLG) underwent a simultaneous preparing program, i.e, oxygen consuming took after by protection preparing. The test went on for two months

amid which 24 instructional meetings were held 3 times a week for 8 weeks.

### TESTING PROCEDURES

Subjects were evaluated when a 6 week preparing program for oxygen consuming limit and anaerobic power. The appraisal was done in the accompanying factors vigorous limit and anaerobic power. The oxygen consuming limit was estimated through ruler school step test and anaerobic power was estimated through markaria kalomen step test. Tests were taken after a general warm – up that comprised of running and extending. Every one of the tests was performed with trials and all the journalist mean esteems

were considered for measurable examination.

### TRAINING PROTOCOL

After the underlying estimation, college gathering and university age aggregate underwent simultaneous vigorous and protection preparing. Both the gatherings prepared for two months, 3 days for each week simultaneous preparing and 3 days for every week normal expertise rehearsal. Prior to the start of the preparation time frames, the subjects of all gatherings were told about the correct execution of the considerable number of activities to be utilized amid the preparation time frame for all preparation regimens.

**TABLE I**  
**CONCURRENT AEROBIC AND RESISTANCE TRAINING**

S.No	Exercise	1-2 week	3-4 Week	5-6 weeks	7-8 weeks
1.	Dribbling with Half Squat	45 % MHR¥45 €3*6(50)†30¥45	55 % MHR¥50 €3*8(60)†40¥50	65 % MHR¥55 €3*8(70)†50¥55	75 % MHR¥60 €3*6(80)†60¥60
2.	Hayani running Bench Press	45 % MHR¥45 €3*6(50)†30¥45	55 % MHR¥50 €3*8(60)†40¥50	65 % MHR¥55 €3*8(70)†50¥55	75 % MHR¥60 €3*6(80)†60¥60
3.	Dug jump Barbell Lunge	45 % MHR¥45 €3*6(50)†30¥45	55 % MHR¥50 €3*8(60)†40¥50	65 % MHR¥55 €3*8(70)†50¥55	75 % MHR¥60 €3*6(80)†60¥60
4.	routation action Lat Pull Down	45 % MHR¥45 €3*6(50)†30¥45	55 % MHR¥50 €3*8(60)†40¥50	65 % MHR¥55 €3*8(70)†50¥55	75 % MHR¥60 €3*6(80)†60¥60
5.	Stair Climbing Peck Tec	45 % MHR¥45 €3*6(50)†30¥45	55 % MHR¥50 €3*8(60)†40¥50	65 % MHR¥55 €3*8(70)†50¥55	75 % MHR¥60 €3*6(80)†60¥60

Note:

MHR= Maximum Heart Rate, ¥ duration of training

€ = set, \* = reputation, () intensity †= rest between sets ¥ =duration of training

### STATISTICAL ANALYSIS

Factual investigation was done after the most vital expressive insights, for example, mean and SD. A rehashed measure't' test was utilized to decide the nearness or nonappearance of additions in each gathering. In view of the slight contrasts in the underlying gatherings, examination of covariance with the pre – test esteems, the covariate was utilized to decide noteworthy contrasts between the post – test

balanced means in the gatherings.

### RESULTS

The outcomes between the pre - and post - test for hazardous oxygen consuming and anaerobic power execution scores in all the two gatherings and the outcomes between bunches at gauge and after the preparation program are exhibited in Table II.

**TABLE II**  
**ANALYSIS OF VARIANCE ON PRE-MID TEST MEANS AND ANALYSIS OF CO-VARIANCE OF POST TEST MEANS AMONG THE CFPG AND UFG ON EXPLOSIVE POWER**

Test	PKPG	CKPG	Source of variance	Sum of square	df	Mean square	F value
Pre-test mean (cm)	47.97	44.97	Between group	15.000	1	15.000	.251
			Within group	3467.933	58	59.792	
Mid -test mean (cm)	49.67	46.57	Between group	43.350	1	43.350	0.71
			Within group	3537.233	58	60.987	
Adjusted mid- test mean (cm)	47.76	47.06	Between group	7.440	1	7.440	3.88
			Within group	109.384	57	1.919	

Significant at 0.05 level (4.00)

Table -II shows the analyzed data on explosive power. The pre-test explosive power means of university and collegiate foot players were 47.97 and 44.97 respectively. The obtained F ratio .251 was less than the table value 4.00 for degrees of freedom 1 and 58. Hence the pre-test explosive power means among the university and collegiate foot players were found to be insignificant. The mid-test explosive power means among the university and collegiate foot players were 49.67 and 46.57 respectively. Hence the obtained F ratio 0.71 was less than the table value 4.00 at 0.05 levels, it was found to be insignificant. The adjusted mid-test explosive power means among the university and collegiate foot players were 47.76 and 47.06 respectively. The obtained F ratio 3.88 was less than the table value 4.00 at 0.05 levels for degrees of freedom 1 and 57. Hence the adjusted test explosive power means among the university and collegiate foot players were found to be insignificant. Therefore the null hypothesis was rejected in the case and it was concluded that university and collegiate football players in developing the speed after 10 weeks of concurrent training

#### DISCUSSION OF COMPARISON

The explosive power was measured by using vertical jump. The university foot players and collegiate foot players significantly improved the explosive power from pre - mid test .The explosive power increased in the university foot players from pre-test (47.97±8.29) to mid-test (49.67±8.44) and collegiate foot players from pre-test (44.97±6.90) to mid test (46.57±6.91) the university and collegiate foot players significantly improved the explosive power from pre-to post test. The explosive power increased in the university foot players from pre- test (47.97±8.29) the post test ( 51.73±8.41) and collegiate foot players from pre-test (44.97±6.90) to post test (48.40±6.64). From the above result the present study demonstrated an increase in explosive power of 3.54,3.55, estimated with vertical jump for university and collegiate foot players respectively from pre-mid test. The result also demonstrated an increase in explosive power of 7.83,7.62 for university and collegiate foot players from pre-post test

#### CONCLUSION

This present study makes a comparison between two groups namely university and collegiate players. The main findings from these study proved that university players were better on explosive power than the collegiate players.

#### REFERENCES

1. Dr S Suthakar, Dr Sundar Raj Urs DP Shivakumar, 2016, Effect of Selected Yogic Exercises on Cardiovascular Endurance and Lung Capacity of Secondary School Children, IJESC, 6, 6 PP. 7286-7289.
2. Dr S Suthakar, Dr Sundar Raj Urs DP Shivakumar, 2016, Effect of selected yogic exercises on selected physiological variable of secondary school children., International Journal of Physical Education, Sports and Health, 4-114.
3. S.Suthakar and Dr.A.Pushparajan, Effects of Silambam and Karate with Yogic Training on Agility and Arm Explosive Power of Collegiate Male Students., International Journal of Innovative Research and Development|| ISSN 2278-0211
4. R.Ashok kumar Dr.S.Suthakar, K.M.Ashokkumar, 2016. An Effective Approach through Strength, Endurance and Skill Training Program Combinations on Muscular Strength and Endurance and Explosive Power of Male Basketball Players., International Journal of Innovative Research and Development., 5,4,218-220.
5. R. Ashok Kumar K. Babu , S. Suthakar, 2016. Effects of Volleyball Specific Resistance Training and Skill Training Packages on the Development of Leg Explosive Power and Agility on the Higher Secondary Level School Boys,2016/3, international journal of innovative research and development, 5, 4,231-235.
6. Dr.S.Suthakar Venkata chalapathi G, 2016. Analysis of physical growth on specific fitness training among tribal and non-tribal school boys, 2016/10/27, International Journal of Physical Education, Sports and Health3,6, 137-142.

7. Satheesh B. and Dr.S. Suthakar. 2016.A Study on the selected motor fitness variables among the bicycle beneficiaries and non beneficiaries of the secondary school children, 2016/10, Indian Streams Research Journal6,9,1-4.
8. M Sankar, S Suthakar, 2016. Influence Of Isolated And Combined Circuit And Fartlek Trainings On Selected Endurance Parameters Among College Men Students, 2016/9/15, International Education and Research Journal, 2,9.
9. Satheesh B and Dr.S. Suthakar, 2016. Comparative study of the psychological well-being and self-confidence between the bicycle beneficiaries and non beneficiaries of the secondary school children,2016/8/27, International Journal of Physical Education, Sports and Health, 3,5, 495-497.
- 10.Dr.S.Suthakar M. Sankar, 2016. Influence of the Isolated and Combined Circuit and Fartlek Trainings on the Selected Strength Parameters among the College Men Students, 2016/8, International Journal of Recent Research and Applied Studies, 3, 8(16), 70-74.
- 11.Dr. S. Suthakar, Nayak Darshana Habbu, 2016. Effects of the Combination of Plyometric and Specific Training with Skill Training in the Development of Anaerobic Capacity, Leg Explosive Power and Over All Playing Ability of the Volleyball Players, 2016/8, International Journal of Recent Research and Applied Studies, 3, 8(19), 83-87.
- 12.Dr. S. Suthakar Muniraju M. G, 2016.Effects of the Short Term Resistance and Regular Resistance Training in the Development of Lower Body Strength, Leg Explosive Power and Shooting Ability on the Male Basketball Players, International Journal of Recent Research and Applied Studies, 3, 8,(12), 51-54.
- 13.Dr.S.Suthakar Muniraju, M. G, 2016.Effects of the Short Term Resistance and Regular Resistance Training in the Development of Muscular Strength Endurance, Upper Body Strength and Passing Ability of the Male Basketball Players, 2016/8, International Journal of Recent Research and Applied Studies, 3,8,(13),55-59.
- 14.Dr.S.Suthakar Nayak Darshana Habbu, 2016. Effect of Combination of Plyometric and Skill Training in the Development of Agility, Muscular Strength Endurance and Serving Ability among the Volleyball Players,2016/8, International Journal of Recent Research and Applied Studies, 3,8,(7),25-29.
- 15.Dr. S. Suthakar Adengada A. Kushalappa, 2016.Correlations of Biomechanical Characteristics with Ball Agility in Penalty Corner Push-In Effect of Basketball Specific Training on Skill Performance Variables among the Inter-collegiate Men Basketball Players of Mangalore University, 2016/7/10, International Journal of Recent Research and Applied Studies, 3, 7(12), 60-63.
- 16.Dr. S. Suthakar Adengada A. Kushalappa, Effect of Basketball Specific Training on Selected Physical Fitness Variables among the Inter Collegiate Men Basketball Players of Mangalore University, 2016/7, International Journal of Recent Research and Applied Studies, 3, 7 (14), 60-63.
- 17.Dr. S Suthakar and Dr. Sundar Raj Urs DP Shivakumar, 2016. Effect of selected yogic exercises on selected physiological variable of secondary school children, 2016/6/23,International Journal of Physical Education, Sports and Health, 3, 4, 114-116.
- 18.DP Shivakumar, S Suthakar, Sundar Raj Urs, 2016. Effect of Selected Yogic Exercises on Cardiovascular Endurance and Lung Capacity of Secondary School Children, 2016/6, International Journal of Engineering Science, 7286.
- 19.Dr.Sundar Raj Urs Kishor V, Dr. S Suthakar, 2016. Analysis of physical fitness and adjustment between physical education and general education teachers, 2016/6, international journal of multidisciplinary educational research, 5, 6(3), 88-91.
- 20.Dr.S.Suthakar Venkata chalapathi G, 2016. Analysis of Aerobic Capacity and Muscular Strength Endurance on the Specific Fitness Training Among the Tribal and Non-Tribal School Boys, 2016/5/11, International multidisciplinary Research Journal, 6, 5, 1-7.
- 21.S. Kanaka Vishnu Moorthi Dr. S. Suthakar, Dr. V. Perumal 2016 The Effects of Three Modalities of Resistance Circuit Training on Agility, Muscular Strength, Muscular Strength and Endurance of Collegiate Male Kabaddi Players, 2016/4, INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH & DEVELOPMENT, 5,5, 282-287.
- 22.Dr.S.Suthakar S.Kanaka Vishnu moorthi, Dr. V.Perumal, 2016. The Effects of two Modalities of Resistance Circuit Training on Flexibility of Collegiate Male Kabaddi Players, 2016/4, International Journal of Recent Research and Applied Studies, 3,4, 71-74.
- 23.Dr.S.Suthakar k.m.Ashok kumar, R.Ashok kumar, 2016. An Effective Approach through Strength, Endurance and Skill Training Program Combinations on Flexibility and Dribbling of Male Basketball Players, 2016/3, International Journal of Innovative Research and Development, 5,4, 221-224.
- 24.R.Ashokkumar K.Babu, S.Suthakar, 2016. Effect of Volleyball Specific Resistance Training and Skill Training Packages on the Development of Flexibility and Muscular Strength and Endurance on the Higher Secondary Level School Boys,

2016/3, International Journal of Innovative research and development, 5,4, 225-230.  
25.M. Sankar, Dr.S.Suthakar, 2016. Influence of the Isolated and Combined Circuit and Fartlek

Trainings on the Selected Strength Parameters among the College Men Students, International Journal of Recent Research and Applied Studies, Volume 3, Issue 8 (16) August 2016.