

Effect of specific training on selected physical fitness variables of college football level players

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Abstract

The purpose of this study was find out the effect of specific training on selected physical fitness variables of college level football players. To achieve the purpose (n=26) twenty-six college level football boys from St.Micheale's College Cherthal, Keral. Their age are ranged from 18 to 25 years. Single group design (experimental group) was used in this study. The following criterion variables were selected for the study namely physical fitness variables are speed, leg explosive power, abdominal strength, flexibility and agility. The training period consists of six weeks Monday to Saturday (except Sunday). The data were collected from before and after the six week of training. The collected data were statistically analyzed by using paired 't' test. The level of significance fixed at 0.05 level. The results shows that physical fitness variables are significantly improved due to specific training program on college level football players.

Keywords: specific training, physical fitness, speed, abdominal strength, leg explosive power, agility and flexibility

Introduction

As a complement to agility training some basic conditioning should be incorporated into the weekly training. Conditioning the metabolism of the body is simply subjecting the body to the highest levels of metabolic by-products possible (i.e. lactic acid, hydrogen ions, etc.), and becoming more efficient at possessing the by-products. Running in a straight line is perhaps the most productive manner to tax the cardiovascular system. Running doesn't take a whole lot of skill to perform and can be done anywhere without any elaborate equipment. Baring injury there is no excuse not to run. As previously stated football is a game of short bursts followed by intermittent rest intervals. Therefore sprint interval training is the most effective manner of conditioning. The intervals used to train should be less than 20 seconds, which translates to approximately 100 yards being the longest distance. The shortest distances can be as little as 10 yards. Conventionally a one to one work, which is the run to rest ratio is used. For example, run 10 seconds then rest 10 seconds between reps. It is imperative that each rep is run at full speed and an all out effort is given. The physiological response desired is a high metabolic response yielding high by- products. The adaptation the body makes is to become more efficient at handling the high metabolic by-products with more efficient enzyme activity.

Build each workout around lower body and core exercises as these are the dominant muscle groups used in badminton, and also include exercises for the upper body. To combine upper and lower body work into the same exercise, perform complex exercises such as front squats combined with shoulder presses or lunges with biceps curls. This will further reduce your strength-training time and allow you to focus on other

elements of your sport.

A sport is an important ingredient of physical education and is a worldwide phenomenon today. The unprecedented popularity and better organization of sports activities and competitions would have been impossible without the recognition of the importance of sports for the modern civilization. the value of exercise programmers is becoming evident as more and more people are participating in such programmers and scientific evidence shows that their benefits are accumulated. Recent medical experiments have indicated that a higher level of strenuous activity must be performed over a relatively long excessive period for prevention of heart diseases.

Methodology

The purpose of this study was find out the effect of specific training on selected physical fitness variables of College level Football players . To achieve the purpose 26 football players from St.Micheale's College Cherthal, Kerala. Their age are ranged from 22 to 25 years. The selected criterion variables are Speed, leg explosive power, abdominal strength, endurance; flexibility and agility were selected as physical fitness variables. The training period consists of total six weeks Monday to Saturday (except Sunday) for every week. The variables Speed was assessed by 30m run. Leg explosive power was assessed by standing vertical jump. Abdominal strength was assessed by 30 seconds sit ups. Endurance was assessed by 800 m run. Flexibility was assessed by sit and reach. Agility was assessed by semo agility test. The data were collected from each subject before and after the six week of training. The collected data were statistically analyzed with paired 't' test. The level significance was fixed at 0.05 levels.

Results

Table 1: Computation of ‘t’ ratio between pre and posttest on physical fitness variables

Variable	Test	Mean	SD	DM	σ DM	‘t’
Speed	Pre test	6.22	0.651	0.15	0.05	2.95*
	Post-test	6.08	0.653			
leg explosive power	Pre test	27.92	11.02	14.77	4.12	3.58*
	Post test	42.69	20.91			
Abdominal strength	Pre test	15.34	4.41	4.33	0.94	4.63*
	Post-test	19.67	4.68			
Endurance	Pre test	4.94	1.09	0.46	0.09	5.32*
	Post-test	4.48	0.99			
Flexibility	Pre test	0.47	7.20	1.64	0.45	3.64*
	Post-test	2.11	6.78			
Agility	Pre test	14.63	2.02	0.98	0.18	5.44*
	Post-test	13.64	1.55			

* Significant

Level of confidence 0.05 with df 25 table value 2.06

Table- I show that the mean values of pre test and post test on speed are 6.22 and 6.08 respectively. The obtained ‘t’ value was 2.95 and the required table value is 2.06. since the obtained ‘t’ ratio is higher than the table value, it is found to be significant. Table- I also reveal that the mean values of

pretest and post test on leg explosive power is 27.92 and 42.69 respectively. The obtained ‘t’ value was 3.58 and the required table value is 2.06. since the obtained ‘t’ ratio is higher than the table value, it is found to be significant. Table -I also reveal that the mean values of pretest and post test on abdominal strength are 15.34 and 19.67 respectively. The obtained ‘t’ value was 4.63 and the required table value is 2.06. since the obtained ‘t’ ratio is higher than the table value, it is found to be significant. Table-1 I also reveal that the mean values of pretest and post test on endurance are 4.94 and 4.48 respectively. The obtained ‘t’ value was 5.32 and the required table value is 2.06. since the obtained ‘t’ ratio is higher than the table value, it is found to be significant. Table -1 also reveals that the mean values of pretest and post test on flexibility are 0.47 and 2.11 respectively. The obtained ‘t’ value was 3.64 and the required table value is 2.06. since the obtained ‘t’ ratio is higher than the table value, it is found to be significant. Further Table- I indicates that the mean values of pretest and post test on agility are 14.63 and 13.64 respectively. The obtained ‘t’ value was 5.44 and the required table value is 2.06. since the obtained ‘t’ ratio is higher than the table value, it is found to be significant.

The means difference of pre and post test on physical fitness variables are presented in figure-1.

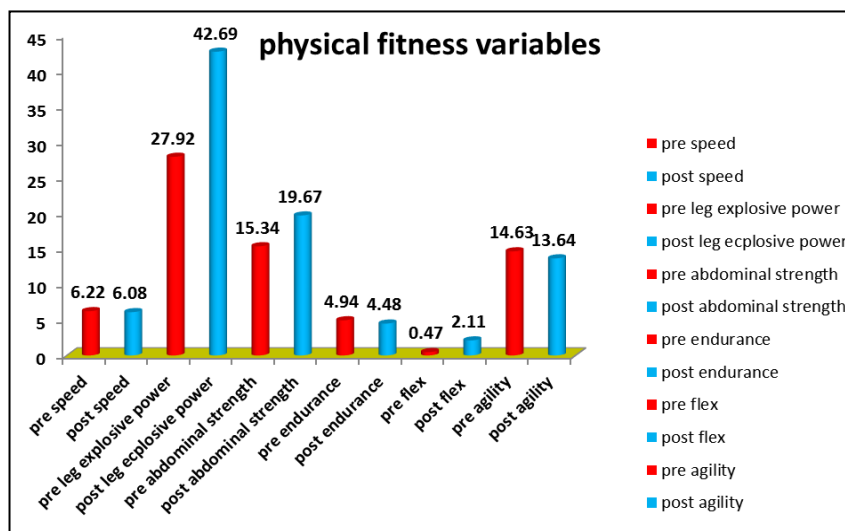


Fig 1: Mean values of selected physical fitness variables are pre and post test on college level football players

Discussion on Findings

Based on results the effect of specific training program significantly improved on selected physical fitness variables are speed, abdominal strength, leg explosive power agility and flexibility. The results conformity with studies specific training program significantly improved Football performance (li tong). Specific warm up program of elite football players improved on fitness variables (Wang *et al.*, 1995)

Conclusions

Within limitation of the present study, then following conclusion are drawn.

1. There is significant improvement on speed, leg explosive power, abdominal strength, endurance, flexibility and agility due to six weeks of specific training program.

References

1. Abraham A, Collins D. Examining and extending research in coach development. *Quest*. 1998; 50:59-79.
2. Wong AS, Chin MK, So RC, Siu OT, Steininger K, Lo DT. Sport specific fitness testing fitness of elite badminton players. 1995.
3. Barrow J. The variables of leadership. A review and conceptual framework. *Academy of Management Review*. 1977; 2:231-251.
4. British Journal Sports Medicine. Sáez de Villarreal E, Suarez-Arrones L, Requena B, Haff GG, Ferrete C. 2015; 29(3):153-157.
5. Carron AV, Chelladurai P. Cohesion as a factor in sport performance. *International Review of Sport Sociology*. 1981; 16:21-41.

6. Chelladurai P, Doherty AJ. Styles of decision-making in coaching. In J.M. Williams (Ed.), *Applied sport psychology: personal growth to peak performance* (3rd ed.). Mountain View, CA: Mayfield. 1998; pp. 115-126.
7. Horn T. Coaching effectiveness in the sport domain. In T. Horn (Ed.), *Advances in sport psychology*, (2nd ed.). Champaign, IL. Human Kinetics. 2002; pp. 309-354.
8. Jowett S. The psychology of interpersonal relationships in sport: The coach-athlete relationship. Unpublished doctoral dissertation. University of Exeter, UK, 2001.
9. Loehr J. Leadership: Full engagement for success. In S. M. Murphy (Ed.), *The sport psych handbook*. Champaign, IL: Human Kinetics. 2005; pp. 155-170.
10. Fuchs M, Faude O, Wegmann M, Meyer T. Critical evaluation of a badminton-specific endurance test, *International Journal of Sports Physiology Performance*. 2014; 9(2):249-55.
11. Lin H, Tong TK, Huang C, Nie J, Lu K, Quach B. Specific inspiratory muscle warm-up enhances badminton footwork performance, *Applied Physiology Nutrition Metabolism*. 2007; 32(6):1082-8.