



**Category: Identification & Nurturing Talent**



## **EFFECTS OF CROSS TRAINING ON SELECTED PHYSICAL FITNESS, PHYSIOLOGICAL AND SKILL PERFORMANCE OF SCHOOL FOOTBALL PLAYERS**

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### **Abstracts**

The study was to find out the effect of cross training on selected physical fitness components physiological variable and skills performance variables of school level football players for these purpose 40 school football players were selected. The subjects were divided into two equal groups' namely experimental group and control group. A period of six week cross training was given to the experimental group. There is no special training given for control group they were doing their normal activity in that period. Speed, Agility, leg explosive power, Cardio respiratory endurance, vital capacity, Kicking and Throw in were selected as the variables for the study. The t-test is used to find out the significant difference between the groups. After the six week of cress training it was concluded that physical fitness components, physiological variables and skill performance are improved. Further it was concluded that the experimental group shows significant improvement than the control group on physical fitness components, physiological variables and skill performance.

### **Introduction**

Cross-training refers to an athlete training in sports other than the one that the athlete competes in, with a goal of improving overall performance. It takes advantage of the particular effectiveness of each training method. Playing football requires the body to function at a high level in many different ways. Cross-training regimens allow you to get well-rounded workouts that challenge all aspects of your body, reduce injury risk and avoid boredom. Any comprehensive cross-training routine for football should include activities that improve a player's cardiovascular endurance, strength, speed and agility. Exercise Physiology is the study of how exercise alters the function and structure of the body. Physical fitness is one of the most important aspects of soccer performance. A skillful player will go a long way in the sport, but without the fitness part of their game they will not be the complete player. Aerobic endurance fitness is one of the most important physical fitness attributes for soccer players. Players need to be able to maintain a high level of intensity throughout the 90 minute game. Another very important fitness component is anaerobic fitness, which means running speed and particularly repeat sprint ability. Players also need good agility, strength, power and flexibility.

### **Methodology**

The purpose of the study was to find out the effect of cross training on selected physical fitness components physiological variable and skills performance variables of school football players. To achieve this purpose of the study 40 football players were selected. The subjects were divided into two equal groups namely experimental group and control group, a period of six week cross training was given to the experimental group. There is no special training given for control group they were doing their normal activity

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for that period. The pre and post test was taken before and after six weeks of period. Speed, Agility, explosive power, Cardio respiratory endurance, vital capacity, Kicking and Throw in were selected as the variables for the study. The t-test is used to find out the significant difference between the groups.

**Table 1: Selection of variables, test items and its measuring units**

S.NO	VARIABLES	TEST ITEMS	UNIT OF MESUREMENTS
1	Speed	50 yard dash	Seconds
2	Agility	Shuttle run (4x10)	Seconds
3	Leg explosive power	Standing broad jump	Meter
4	Cardio respiratory endurance	12 minutes cooper test	Distance in kilo meter
5	Vital capacity	Wet Spiro meter	Liters
6	Kicking ability	Kicking for distance	Meter
7	Throw in	Throw for distance	Meter

## TRAINING SCHEDULE

The cross training was given in a period of six week, in a week 5 days, in a day 2 session the games and events such as swimming, handball, basketball, volleyball, cycling, half marathon, American football, long jump, and sprint events given as a training.

**Table 2 Computation of t-ratio between the pre test and post test for control group**

no	Variable	Test	mean	Standard deviation	T' ratio
1	Speed	Pre test	7.63	0.34	0.069
		Post test	7.60	0.32	
2	Agility	Pre test	11.16	0.28	0.981
		Post test	11.09	0.26	
3	Leg explosive power	Pre test	1.55	0.23	0.542
		Post test	1.57	0.22	
4	Cardio respiratory endurance	Pre test	1.860	180.48	0.634
		Post test	1.864	181.86	
5	Vital capacity	Pre test	2.753	297.29	1.795
		Post test	2.780	298.33	
6	Kicking	Pre test	29.31	1.14	2.435*
		Post test	30.31	1.63	
7	Throw in	Pre test	15.64	0.68	1.921
		Post test	15.92	0.70	

\*Significant at 0.05 level of confidence

From the result of the above table we can easily identify the kicking ability of control group is improved other than the kicking there is no difference in other variables.

**Table 3 Computation of t-ratio between the pre test and post test for experimental group**

no	Variable	Test	mean	Standard deviation	T' ratio
1	Speed	Pre test	7.94	0.54	4.685*

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		Post test	7.57	0.47	
2	Agility	Pre test	11.13	0.64	3.99*
		Post test	10.03	0.57	
3	Leg explosive power	Pre test	1.66	0.23	4.861*
		Post test	1.71	0.23	
4	Cardio respiratory endurance	Pre test	1.953	3.09	10.583*
		Post test	2.020	3.01	
5	Vital capacity	Pre test	2.773	2.86	12.602*
		Post test	2.993	2.54	
6	Kicking	Pre test	31.45	3.44	10.416*
		Post test	33.64	3.78	
7	Throw in	Pre test	15.76	1.75	7.504*
		Post test	16.95	1.59	

\*Significant at 0.05 level of confidence

From the table three it was clearly showed that speed, agility, leg explosive power, cardio respiratory endurance, vital capacity, kicking and throw of the experimental group was significantly improved in 0.05 level of significance.

## Conclusion:

- It was concluded that physical fitness components, physiological variables and skill performance are improved due to six week of cross training programme.
- Further it was concluded that the experimental group shows significant improvement than the control group on physical fitness components, physiological variables and skill performance due to cross training.

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