

**ASSESSMENT OF SELECTED GENERAL FITNESS VARIABLES OF SCHOOL VOLLEYBALL PLAYERS IN TIRUCHIRAPPALLI DISTRICT OF TAMILNADU THROUGH SELECTED YOGIC PRACTICES COMBINED WITH PLYOMETICS****M. Ramanathan\* / Dr.D. Prasanna Balaji\*\***

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**Abstract**

The purpose of this study was to assess the selected general fitness variables of school volleyball players in Tiruchirappalli District of Tamilnadu through selected yogic practices combined with plyometrics. To achieve this purpose, sixty (N=60) boys school Volleyball players in Tiruchirappalli District, Tamilnadu, India were selected as subjects. The athletes' age ranged between 14 and 16 years. The subjects were divided at random into four groups of fifteen each (n=15). Group-I underwent Yogic practices, Group-II underwent Plyometric training, Group-III underwent combined yogic practices and plyometric training and Group-IV acted as Control. All the Experimental groups undergo their respective training for 8 weeks in addition to the regular training as per School curriculum. Among various general fitness variables, Speed only was selected as dependent variable and it was assessed by 50 meters run test. The data was collected from the four groups prior to and post experimentation on Speed was statistically analyzed by using Analysis of Covariance (ANCOVA). Hence, whenever the 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 results of the study showed there was a significant differences among the selected groups, further the results showed, combined yogic practices and plyometric training group was better than other groups on the development of Speed.

**Key words:** Yogic practices, Plyometric training, combined yogic practices and Plyometric training Speed

**INTRODUCTION**

Training is the main component and the basic form of preparing the athlete for higher level of performance. It is a systematically planned preparation with the help of the exercise which realizes the main

factors of influencing athlete's progress. The content of training includes all the basic types of preparation of the sportsmen such as physical, technical, tactical and psychological. Through systematic training the athletes "fitness level" and his acquisition of vital knowledge and skill are

improved. The word “training” means different things in different fields. In sports the word “training” is generally understood to be synonym of doing exercise. In a narrow sense training is physical exercise for the improvement of performance. Training involves constructing an exercise programme to develop an athlete for a particular event. This increasing skill and energy capacities need equal consideration (Singh, 1991). Plyometric refers to exercises that enable a muscle to reach maximal strength in as short a time as possible. Such exercise usually involves some form of jumping, but other modes of exercise exist. The elements ply and metric come from Latin roots for ‘increase’ and ‘measure’, ‘respectively; the combination thus means “measurable increase”. Plyometric exercise utilize the force of gravity (e.g., you step off a box) to store energy in the muscles (potential energy). This energy is then utilized immediately in an opposite reaction (e.g., you immediately jump up, up on landing), so the natural elastic properties of the muscle will produce kinetic energy (Dary, 1998). Yoga is an ancient Indian practice dealing with the well being of human mind, body and spirit. The principles of yoga, called Yoga sutra, were given by Patanjali, a saint philosopher and a physician, who lived around 3 centuries before Christ. He is known as the founder of yoga. These sutras are timeless and hold true even today. They help you to lead a blissful life by improving your physical, emotional and spiritual well-being

## METHODOLOGY

The purpose of this study was to assess the selected general fitness variables of school volleyball players in

Tiruchirappalli District of Tamilnadu through selected yogic practices combined with Plyometric. To achieve this purpose, sixty (N=60) boys school Volleyball players in Tiruchirappalli District, Tamilnadu, India were selected as subjects. The athletes’ age ranged between 14 and 16 years. The subjects were divided at random into four groups of fifteen each (n=15). Group-I underwent Yogic practices, Group-II underwent Plyometric training, Group-III underwent combined yogic practices and Plyometric training and Group-IV acted as Control. All the Experimental groups undergo their respective training for 8 weeks in addition to the regular training as per School curriculum. Among various general fitness variables, Speed only was selected as dependent variable and it was assessed by 50 meters run test. 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 in the simple effect 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.

## RESULTS AND DISCUSSION

The Analysis of covariance (ANCOVA) on Speed of Yogic practices group, Plyometric training group and combined yogic practices and Plyometric training and Control group have been analyzed and presented in Table -I.

Table –I

**ANALYSIS OF COVARIANCE ON MUSCULAR ENDURANCE OF YOGIC PRACTICES GROUP, PLYOMETRIC TRAINING GROUP AND COMBINED YOGIC PRACTICES AND PLYOMETRIC TRAINING AND CONTROL GROUP**

Adjusted Post-test Means				Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
Yogic Practices Group	Plyometric Training Group	Combined Yogic Practices and Plyometric Training Group	Control Group					
7.29	7.16	6.89	7.66	Between	4.62	3	1.54	27.11*
				With in	3.09	55	0.06	

\* Significant at .05 level of confidence

(Speed Scores in Seconds)

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

Table-I shows that the adjusted post test mean value of Speed for Yogic practices group, Plyometric training group and combined yogic practices and Plyometric training and Control group are 7.29, 7.16, 6.89 and 7.66 respectively. The obtained F-ratio of 27.11 for adjusted post test mean is more than the table value of 2.77 for df 3 and 55 required for significant at 0.05 level of confidence. The results of the study indicate that there are significant differences

among the adjusted post test means of Yogic practices group, Plyometric training group and combined yogic practices and Plyometric training and Control group on the development of Speed. To determine which of the paired means had a significant difference, the Scheffe's test was applied as Post hoc test and the results are presented in Table-II.

**TABLE – II**

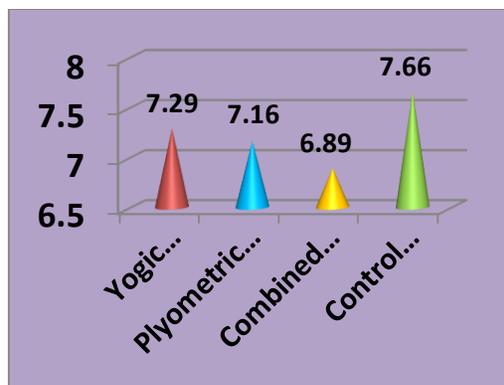
**THE SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN THE ADJUSTED POST TEST PAIRED MEANS ON SPEED**

Adjusted Post-test Means				Mean Difference	Confidence Interval
Yogic Practices Group	Plyometric Training Group	Combined Yogic Practices and Plyometric Training Group	Control Group		
7.29	7.16	--	--	0.13*	0.12
7.29	--	6.89	--	0.14*	0.12
7.29	--	--	7.66	0.37*	0.12
--	7.16	6.89	--	0.27*	0.12
--	7.16	--	7.66	0.50*	0.12
--	--	6.89	7.66	0.77*	0.12

**\* Significant at 0.05 level of confidence**

Table-II shows that the adjusted post test mean difference on yogic practice group and plyometric training group, yogic practice group and combined yogic practices and plyometric training group, plyometric training group and combined yogic practices and plyometric training group, plyometric training group and control group and combined yogic practices and plyometric training group and Control group are 0.13, 0.14, 0.37, 0.27, 0.50 and 0.77 respectively. The values are greater than the confidence interval 0.12, which shows significant differences at 0.05 level of confidence. It may be concluded from the results of the study that there is a significant difference in Speed between the adjusted post test means of yogic practice group and plyometric training group, yogic practice group and combined yogic practices and plyometric training group, plyometric training group

and combined yogic practices and plyometric training group, plyometric training group and control group and combined yogic practices and plyometric training group and control group. However, the improvements of Speed were significantly higher for combined yogic practices and plyometric training group than yogic practices group, plyometric training group and control group. It may be concluded that combined yogic practices and plyometric training group is better than yogic practices group, plyometric training group and control group in improving Speed. The adjusted post test mean values of Yogic practices group, Plyometric training group and combined yogic practices and plyometric training and Control group on Speed are graphically represented in the Figure -I.



**Figure: I**

The adjusted post test mean values of Yogic practices group, Plyometric training group and combined yogic practices and plyometric training and Control group on Speed

### CONCLUSION

From the analysis of the data, the following conclusions were drawn. The Experimental groups namely, Yogic practices group, Plyometric training group and combined yogic practices and plyometric training had significantly improved in Speed. Significant differences in achievements were found between Yogic practices group, Plyometric training group and combined yogic practices and plyometric training in all the selected criterion variable such as Speed. The Combined Yogic Practices and Plyometric Training was found to have greater impact on the Group concerned than the Yogic Practices group, Plyometric Training group and Control group in enhancing the performance of Speed.

### REFERENCES

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