

How to Cite:

Siyad, B. R., & Manickam, V. A. (2022). Cloistered and coalesce effect of power yoga and plyometric training on selected physical variable among tribal taekwondo players. *International Journal of Health Sciences*, 6(S5), 2241–2246. <https://doi.org/10.53730/ijhs.v6nS5.9131>

Cloistered and coalesce effect of power yoga and plyometric training on selected physical variable among tribal taekwondo players

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Abstract---The purpose of the study was to determine the Cloistered and Coalesce effect of Power Yoga and Plyometric Training on selected Physical variable among Tribal Taekwondo Players. To achieve this purpose, sixty (N=60) girls Tribal Taekwondo players studying various schools in Kerala. Their age ranged from 14 to 16 years. The subjects were assigned at random into four groups of fifteen in each (n=15). Group-I underwent Power Yoga, Group-II underwent Plyometric Training, Group-III underwent Coalesce Power Yoga and Plyometric Training and Group -IV was as the Control group. Speed was selected as dependent variable and it was assessed by 50 Meters Sprint test. The data collected from the four groups prior to and immediately after the training programme on the selected criterion variables were statistically analyzed with Analysis of Covariance (ANCOVA). Whenever the 'F' ratio for adjusted post test means was found to be significant, Scheffe's test was followed, as a post hoc test to determine which of the paired mean differences was significant. In all the cases .05 level of confidence was fixed. The experimental groups namely, power yoga, plyometric training and coalesce power yoga and plyometric training had significantly improved in speed. Coalesce power yoga and plyometric training **group** was found to better than power yoga group and plyometric training group in improving speed.

Keywords---Power yoga, Plyometric training, Training, Sprinting, Speed.

Introduction

Power yoga is a general term used to describe a vigorous, fitness-based approach to [vinyasa-style](#) yoga. Though many consider power yoga to be superficial "gym yoga," this style of yoga practice was originally closely modeled on the [Ashtanga](#) method. Power yoga incorporates the athleticism of Ashtanga, including lots of vinyasas (series of poses done in sequence) but gives each teacher the flexibility to teach any poses in any order, making every class different. With its emphasis on strength and flexibility, power yoga brought yoga into the gyms of America as people began to see yoga as a way to work out (Schubert et al., 2018).

Power Yoga is a fitness-based practice. An offshoot of Ashtanga Yoga, it has many of the same qualities and benefits, including building internal heat, increased stamina, strength, and flexibility, as well as stress reduction. Teachers design their own sequences, synchronize their breath with their movements. It involves flowing through many poses in rapid succession, it can be challenging for yoga newbie's who aren't super familiar with the poses. So in this routine, the scholar took the two core principles of power yoga breath-based movement and flowing between the poses and made the flows simpler and safer than traditional. The workout is still heating and meditative, but accessible to all levels even for beginners (Tamizhmaran and Manju Pushpa, 2020).

Plyometric is a type of exercise which utilizes the stretch shortening cycle of musculotendinous tissue. Eccentric stretching is followed by concentric shortening of the same muscles. Often involves rebound activities. Plyometric training also called stretch shortening drills or stretch strengthening drills or reactive neuromuscular training (Kisner Wilk, 1993).

Plyometric is thought of as missing link between weight training (strength) and athletic performance (power), with particular emphasis on the speed of activity. It is a form of training designed to develop explosive power for athletics. Running, walking and hopping are typical examples in human locomotion of how external forces (e.g. gravity) lengthen the muscle. In this lengthening phase the muscle is acting eccentrically then a concentric (shortening) action follows. The true definition of eccentric action indicates that the muscles must be active during stretch. This combination of eccentric and concentric actions forms a natural type of muscle function called the stretch-shortening cycle (SSC). The period of time between the stretch and shortening cycles is known as the amortization phase. Amortization phase is kept very brief by a rapid reversal of movements to capitalize on the increased tension in the muscle (Paavo, 2000).

Methodology

To achieve this purpose, sixty (N=60) girls Tribal Taekwondo players studying various schools in Kerala. Their age ranged from 14 to 16 years. The subjects were assigned at random into four groups of fifteen in each (n=15). Group-I underwent Power Yoga, Group-II underwent Plyometric Training, Group-III underwent Coalesce Power Yoga and Plyometric Training and Group -IV was as the Control group. Speed was selected as dependent variable and it was assessed

by 50 Meters Sprint test. The data collected from the four groups prior to and immediately after the training programme on the selected criterion variables were statistically analyzed with Analysis of Covariance (ANCOVA). Whenever the 'F' ratio for adjusted post test means was found to be significant, Scheffe's test was followed, as a post hoc test to determine which of the paired mean differences was significant. In all the cases .05 level of confidence was fixed.

Analysis of the Data

The results of the Analysis of Covariance on Speed of the pre, post, and adjusted test scores of Power Yoga group, Plyometric Training group, Coalesce Power Yoga and Plyometric Training group and Control group are presented in Table – 1.

Table – 1
Analysis of Covariance on Speed of Experimental Groups and Control Group

Test	Power Yoga group	Plyometric Training group	Coalesce Power Yoga and Plyometric Training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	F ratio
Pre Test Mean	7.60	7.58	7.58	7.64	Between	0.03	3	0.01	0.16
					Within	3.74	56	0.07	
Post Test Mean	6.63	6.63	6.31	7.60	Between	14.01	3	4.67	52.34*
					Within	5.00	56	0.09	
Adjusted Post Test Mean	6.63	6.64	6.32	7.58	Between	13.18	3	.40	64.65*
					Within	3.74	55	0.07	

* Significant at 0.05 level of confidence (Speed Scores in 1/100th of a Second)

Table value for df (3, 56) at 0.05 level = 2.76 Table value for df (3, 55) at 0.05 level = 2.78

The table-1 indicates that the pre-test mean values on Speed of Power Yoga group, Plyometric Training group, Coalesce Power Yoga and Plyometric Training group and Control group are 7.60, 7.58, 7.58, & 7.64 respectively. The obtained 'F' ratio of 0.07 for pre-test scores was lesser than the table value of 2.76 for degrees of freedom 3 and 56 required for significance at 0.05 level of confidence on Speed.

The post test mean values on Speed of Power Yoga group, Plyometric Training group, Coalesce Power Yoga and Plyometric Training group and Control group are 6.63, 6.63, 6.31 & 7.60 respectively. The obtained 'F' ratio of 52.34 for post-test

scores was higher than the table value of 2.76 for degrees of freedom 3 and 56 required for significance at 0.05 level of confidence on Speed.

The adjusted post-test means on Speed of Power Yoga group, Plyometric Training group, Coalesce Power Yoga and Plyometric Training group and Control group are 6.63, 6.64, 6.32 and 7.58 respectively. The obtained 'F' ratio of 64.65 for adjusted post-test scores was higher than the table value of 2.78 for degrees of freedom 3 and 55 required for significance at 0.05 level of confidence on Speed.

The results of the study indicate that there are significant differences among the adjusted post test means of Power Yoga group, Plyometric Training group, Coalesce Power Yoga and Plyometric Training group and Control group in Speed. To determine which of the paired means have a significant difference, the Scheffe's test is 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 test
paired means on Speed

Adjusted Post-test Means				Mean Difference	Confidence Interval
Power Yoga group	Plyometric Training group	Coalesce Power Yoga and Plyometric Training group	Control group		
6.63	6.64			0.01	0.27
6.63		6.32		0.31*	0.27
6.63			7.58	0.94*	0.27
	6.64	6.32		0.32*	0.27
	6.64		7.58	0.94*	0.27
		6.32	7.58	1.26*	0.27

* Significant at 0.05 level of confidence

Table-1 shows that the adjusted post test mean differences on Speed between Power Yoga and Coalesce Power Yoga and Plyometric Training group, Power Yoga group and Control group, Plyometric Training group and Coalesce Power Yoga and Plyometric Training group, Plyometric Training group and Control group & Coalesce Power Yoga and Plyometric Training group and Control group are 0.31, 0.94, 0.32, 0.94 and 1.26 respectively, which are greater than the confidence interval value of 0.27 at 0.05 level of confidence.

Further the table-1 shows that the adjusted post test mean differences on Speed between Power Yoga group and Plyometric Training group is 0.01, which is less than the confidence interval value of 0.27 at 0.05 level of confidence. The results of the study showed that there was a significant difference between Power Yoga and Coalesce Power Yoga and Plyometric Training group, Power Yoga group and Control group, Plyometric Training group and Coalesce Power Yoga and Plyometric Training group, Plyometric Training group and Control group & Coalesce Power Yoga and Plyometric Training group and Control group on Speed.

Further the results of the study showed that there was no significant difference between Power Yoga group and Plyometric Training group, on Speed. The above data also reveal that Coalesce Power Yoga and Plyometric Training group had shown better performance than Power Yoga group, Plyometric Training group, and Control group in Speed.

The Pre and Post test mean values of Power Yoga group, Plyometric Training group, Coalesce Power Yoga and Plyometric Training group and Control group on Speed are graphically represented in the Figure -1.

The Adjusted post test mean values of Power Yoga group, Plyometric Training group, Coalesce Power Yoga and Plyometric Training group and Control group on Speed are graphically represented in the Figure -2.

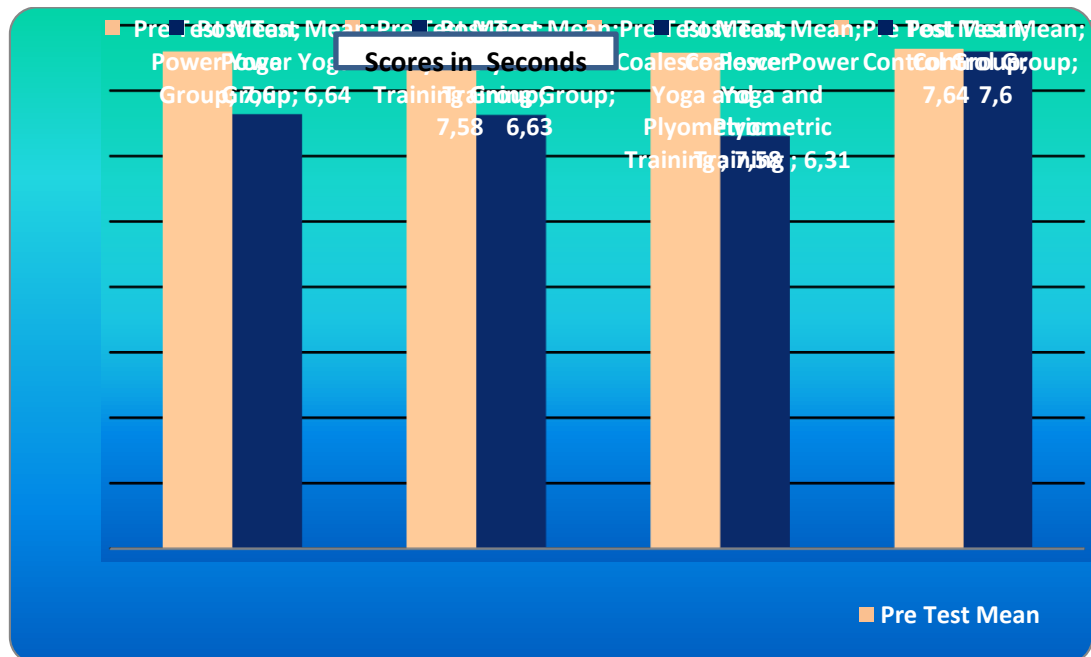


Figure: 1 The Pre and Post test mean values of Power Yoga group, Plyometric Training group, Coalesce Power Yoga and Plyometric Training group and Control group on Speed

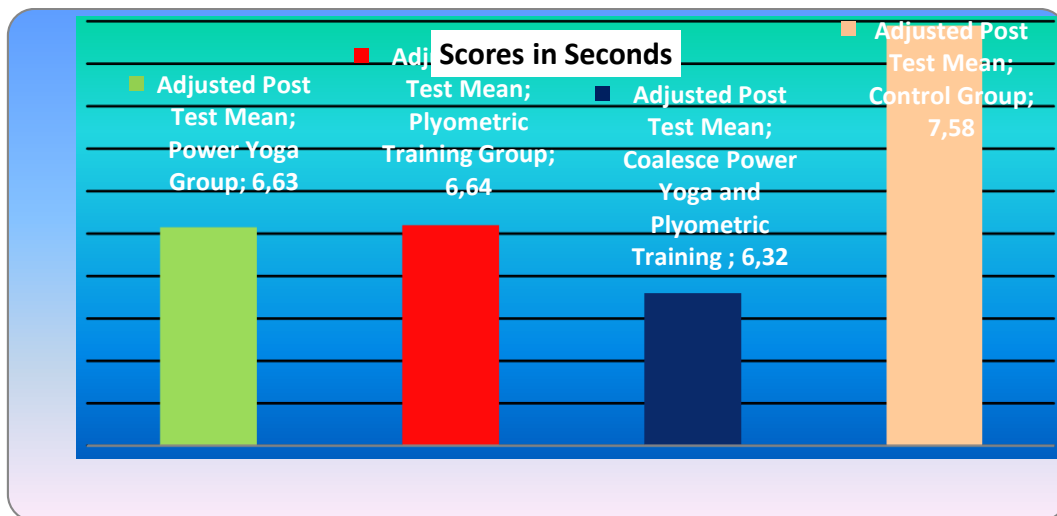


Figure: 2 The Adjusted Post test mean values of Power Yoga group, Plyometric Training group, Coalesce Power Yoga and Plyometric Training group and Control group on Speed

Conclusion

The experimental groups namely, Power yoga, Plyometric training and Coalesce of Power yoga and Plyometric training had significantly improved in selected physical variables such as Speed among the tribal Taekwondo players. Significant differences were also found among Power yoga, Plyometric training, Coalesce of Power yoga and Plyometric training and Control group in selected physical variables such as Speed among the tribal Taekwondo players. Further the results showed Coalesce of Power yoga and Plyometric training group was found to better than Cloistered Power yoga group and Cloistered Plyometric training group in improving Speed among the tribal Taekwondo players.

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