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Effect Of Plyometric Training With Yogic Practices On Selected Physical And Physiological Variables Among Adolescent Boys

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Abstract:

The purpose of the study was to find out the effects of plyometric training with yogic practices on selected physical and physiological variables among adolescent boys. To examine 30 adolescent boys were selected from Sri Visweswara Vidyalaya Matric Higer Secondary School, Coimbatore. The age group ranges from 13 to 18 years. Subjects were equally divided into two equal groups namely experimental group and control group. Plyometric training with yogic practices was given to experimental group. Control group did not participate in any special training programme. The Plyometric training with yogic practices was scheduled for twelve weeks prior and after the training for the subjects pre – test and post – test was conducted on agility and breath hold time were tested. The data collected from the subjects were statistically analyzed with't' ratio to find out significant difference among experimental group and control group. The analysis of the data indicates that plyometric training with yogic practices improved agility and breath hold time.

Key words: *Plyometric training, Yogic practice.*

1.Introduction

Physical exercise is any bodily activity that enhances or maintains physical fitness and overall health and wellness. It is performed for various reasons including strengthening muscles and the cardiovascular system, honing athletic skills, weight loss or maintenance, as well as for the purpose of enjoyment. Frequent and regular physical exercise boosts the immune system, and helps prevent the "diseases of affluence" such as heart disease, cardiovascular disease, Type 2 diabetes and obesity. (Stampfer, M. J 2000).Plyometrics, also known as "jump training" or "plyos", are exercises based around having muscles exert maximum force in as short a time as possible, with the goal of increasing both speed and power. This training focuses on learning to move from a muscle extension to a contraction in a rapid or "explosive" way, for example with specialized repeated jumping. Plyometrics are primarily used by athletes, especially high jumpers, to improve performance, and are used in the fitness field to a much lesser degree.The term plyometrics was coined by Fred Wilt after watching Soviet athletes prepare for their event in track and field. He felt this was a key to their success. It is a poor term to describe what happens but it has since been accepted and is now well established. When Wilt learned of the work being done by Michael Yessis on Soviet (Russia) training methods, they quickly collaborated to help disseminate information on plyometrics. Wilt, Fred & Yessis, Michael. (1984)The use of plyometric with yogic practices in younger has proven itself to be successful in improving their agility ,linear jump capabilities and breath holding performance, but also, execution, concentration and aptitude for learning new motor skills. The level of intensity, the total volume, should be sacrificed for increased frequency and exposure to skill development.Yoga is another way to stretch your body while also working on balance, endurance and stress relief. Adding yoga to your routine a few times a week is a nice compliment to strength training and cardio, giving you a gentle, soothing way to work your body and mind.Asana is a body position, typically associated with the practice of Yoga, originally identified as a mastery of sitting still. In the context of Yoga practice, asana refers to two things: the place where a practitioner (or yogin, in general usage), yogi (male), or yogini (female) sits and the manner (posture) in which he/she sits. In the Yoga sutras, Patanjali suggests that asana is "to be seated in a position that is firm, but relaxed" for extended, or timeless periods. Sri Ramakrishna Math *et.al,* (1899).

2.Methodology

To execute the study, the scholar employed random sampling method and thirty adolescent boys were selected as subjects from Sri Visweswara Vidyalaya Higher Secondary School, Coimbatore. The age ranged between 13-18 years. The subjects were divided into two groups. Namely Experimental group and control group. Experimental group consist of 15 subjects this group underwent plyometric training with yogic practices and control group consist of 15 subjects this group do not participate in any specific training. Agility was measured by shuttle run, and breath hold time was measured in Seconds. All the subjects were treated with plyometric training with yogic practices for twelve weeks before and after the training pre test, post test scores were taken for all the subjects and analyzed the data using 't' ratio statistics.

3.Analysis Of Data

The collected data was statistically analyzed by using dependent't' test. It was found that there was a significant increase in plyometric training with yogic practice for adolescent boys. In all cases the level of significance was set at 0.05 level.

VARIABLES		**MEAN**	**S.D**	**M.D**	**SE**	**'t' Ratio**	**SIG**
Agility	Pre	12.28	0.552				
	Post	10.73	0.668	1.54	0.278	5.541	.000
Breath holding time	Pre	20.02	4.22				
	Post	23.45	5.13	3.43	0.432	7.942	.755

TABLE 1:Computation Of 'T' – Ratio Between Pre And Post Test Means Of Plyometric Training With Yogic Practice Group
**Significant At 0.05 Level Of Confidence (2.145)*

Table I reveals that computation of 't' ratio between mean of pre and post test on agility of adolescent boys. The mean values for pre and post test of experimental group were 12.28 and 10.73 respectively. Since the obtained 't' ratio 5.541 was greater than the required table value 2.145, it was found to be significant for the degrees of freedom 1 and 14 at 0.05 level of confidence.The computation of 't' ratio between mean of pre and post test on breath hold time of adolescent boys. The mean values for pre and post test of experimental group were 20.02 and 23.45 respectively. Since the obtained 't' ratio 7.942

was greater than the required table value 2.145, it was found to be significant for the degrees of freedom 1 and 14 at 0.05 level of confidence.The results clearly indicated that the agility, breath hold time of adolescent boys significantly improved to the influence of plyometric with yogic practices group.

VARIABLES		**MEAN**	**S.D**	**M.D**	**SE**	**'t' Ratio**	**SIG**
Agility	Pre	12.35	0.524	0.133	0.086	1.533	.148
	Post	12.48	0.466				
Breath holding time	Pre	20.02	4.23	0.165	0.519	0.318	.788
	Post	19.85	4.59				

Table 2:Computation Of 'T' – Ratio Between Pre And Post Test Means Of Plyometric Training With Yogic Practice For Control Group
**Significant At 0.05 Level Of Confidence (2.145)*

Table II reveals that computation of 't' ratio between mean of pre and post test on agility of adolescent boys. The mean values for pre and post test of plyometric group were 12.35 and 12.48 respectively. Since the obtained 't' ratio 1.533 was less than the required table value 2.145, it was found to be not significant for the degrees of freedom 1 and 14 at 0.05 level of confidence.The computation of 't' ratio between mean of pre and post test on breath hold time of adolescent boys. The mean values for pre and post test of plyometric group were 20.02 and 19.85 respectively. Since the obtained 't' ratio 0.318 was less than the required table value 2.145, it was found to be not significant for the degrees of freedom 1 and 14 at 0.05 level of confidence. The results clearly indicated that the agility, breath hold time of control group adolescent boys of plyometric with yogic practices group had not been improved.

4.Discussion And Finding

The hypothesis were tested on the subjects after 12 weeks of combined plyometric training and yoga practice which lead to the improvement in physical fitness and physiological variables. Moreover it was observed that the subjects practiced the training showed greater different from pretest to posttest for experimental group when compared to control group.

Results from several investigation involving adults suggest that combined plyometric training with yogic practices may be useful for enhancing physical and physiological performance Roophand Martin s, Lue-Chin p (2010) and Michael G. Miller I, et.al.,(2006). Reported that after 3 weeks of training adult subject who combined plyometric training with yoga practices can lead to significantly improves in agility. Madanmohan, Thombre DP et.al., (1992). Results show that yoga practice for 12 weeks results in significant increase in and breath holding times.

5.Conclusion

From the result it was concluded that plyometric training with yogic practices programme the following improvements occurred on speed, agility, resting pulse rate and breath hold time. Plyometric training with yogic practices improves the speed, agility, resting pulse rate and breath hold time. After twelve weeks of plyometric training with yogic practices the variables are speed, agility, resting pulse rate and breath hold time increased on performance on plyometric training with yogic practices for adolescent boys when compared to the control group.

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