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Effects of Plyometric Training with Yogic Practices on Selected Physical and Physiological Variables among Schools 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 schools boys. To examine 30 Secondary School boys were selected from Government Boys Higher Sec School Erumapatty, Namakkal District, Tamilnadu. The age group ranges from 13 to 16 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 eight weeks prior and after the training for the subjects pre – test and post – test was conducted on shoulder strength (Push-ups) and physiological parameters (Breath Holding Time, Resting Heart Rate) 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 shoulder strength and physiological parameters (Breath Holding Time, Resting Heart Rate).

Keywords: Plyometric Training with Yogic Practices and school boys.

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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).

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Yogic Practice

The word "Yoga" is derived from the Sanskrit

root “Yuj” which means union, joining, harnessing, contact, or connection. It is union between the individual self and the universal self. It is the fusion of a healthy body with a disciplined mind for the purpose of spiritual development. Yoga is also blissful contact with the supreme element, higher than the highest of the known elements. It is the harnessing of one’s inherent inner power, as well as the wider natural forces from which one have emerged. Yoga is an inseparable part of the Indian life and culture. It has come down to us from antiquity with an unbroken tradition. Integration encompasses putting together and controlling the same judiciously. This is consistent with the definition of Yoga in “Bhagavad Gita” which says, “Smatvameva Yoga Uchyate” that is equanimity is called Yoga. It means that yoga remains equipoise in success and failure, gain and loss, victory and defect etc. The term ‘Samatva’ may also be translated as equilibrium, which leads to harmonious development of the physical, mental and spiritual aspects of human personality. Equanimity and equilibrium are thus the essential traits of Yoga. They help in the Skillful performance of an action.

Methodology

To execute the study, the scholar employed random sampling method and thirty adolescent boys

Results

Table 1

Computation of ‘T’ Ratio on Selected Plyometric Training with Yogic Practices Variables of School Boys. on Experimental Group and Control Group

Group	Variables	Test	Mean	N	Std. Deviation	Std. Error	‘t’ ratio
Experimental group	Shoulder Strength	Pre test	20.10	15	1.73	0.21	3.16*
		Post test	22.08	15	1.89		
	Breath Holding time	Pre test	21.53	15	2.23	0.33	6.25*
		Post test	23.60	15	2.35		
	Resting Heart Rate	Pre test	79.41	15	4.89	0.34	8.51*
		Post test	76.48	15	4.15		
Control group	Shoulder Strength	Pre test	20.47	15	1.84	0.37	1.80
		Post test	20.53	15	1.64		
	Breath Holding time	Pre test	21.47	15	3.31	0.407	0.16
		Post test	21.40	15	3.99		
	Resting Heart Rate	Pre test	79.47	15	5.76	1.16	0.22
		Post test	79.73	15	7.57		

*Significant level 0.05 level degree of freedom (2.14, 1 and 14)

Table I reveals the computation of mean, standard deviation and ‘t’ ratio on selected physical and physiological parameters namely shoulder strength, Breath Holding Time, Resting Heart Rate experimental group. The obtained ‘t’ ratio on shoulder strength, Breath Holding Time, Resting Heart Rate were 3.16, and 6.25, 8.51 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained ‘t’ values were greater than the table value it was found to be statistically

were selected as subjects from Government Boys Higher Sec School Erumapatty, Namakkal District, TamilNadu. The age ranged between 13-16 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. The respective training was given to the experimental group the 3 days per weeks (alternate days) for the training period of eight weeks. The control group was not given any sort of training except their routine.

The evaluated physical parameters were shoulder strength was assessed by Push-ups and the unit of measurement was in counts, and Breath Holding Time, Resting Heart Rate the unit of were measured at baseline and after eight weeks of plyometric training with yogic practices were experimental group. Statistical Analysis The collected data before and after training period of 8 weeks on the above said variables due to the impact of plyometric training with yogic practices was statistically analyzed with ‘t’ test to find out the significant improvement between pre and post-test. In all cases the criterion for statistical significance was set at 0.05 level of confidence.

significant. Further the computation of mean, standard deviation and ‘t’ ratio on selected physical and physiological parameters namely shoulder strength, Breath Holding Time, Resting Heart Rate control group. The obtained ‘t’ ratio on shoulder strength, Breath Holding Time, Resting Heart Rate were 1.80, and 0.16, 0.22 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained ‘t’ values were lesser than the table value it was found to be statistically not

significant.

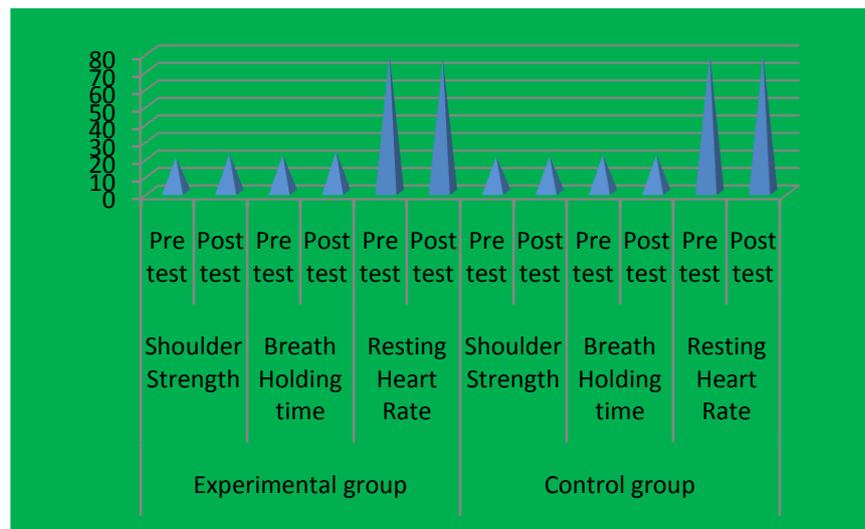


Figure 1

Bar diagram showing the mean value on Physical and Physiological Parameters of School Boys on Experimental and Control Group

Discussion Findings

The present study experimented the impact of Plyometric Training with Yogic Practices on physical and physiological parameters of school boys. The result of the study indicated that the Plyometric Training with Yogic Practices improved the physical parameters such as shoulder strength, Breath Holding Time, Resting Heart Rate the findings of the present study had similarity with the findings of the investigations referred in this study. However, there was a significantly changes of subjects in the present study the shoulder strength, Breath Holding Time, Resting Heart Rate was significantly improved of subject in the group may be due to the in yogic practice.

Conclusions

1. It was concluded that eight weeks Plyometric Training with Yogic Practices significantly improved the shoulder strength, Breath Holding Time, Resting Heart Rate of the school boys.
2. Plyometric Training with Yogic Practices is one among the most appropriate means to bring about the desirable changes over physical and physiological variables of school boys. Hence, suggested that coaches and the experts deal with school boys to incorporate. Plyometric Training with

Yogic Practices as a component in their training programme.

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