

Effects Of Plyometric Training With And Without Yogic Practices On Reaction Time Among Handball Players

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ABSTRACT

The purpose of the study was to find out the effect of plyometric training with and without yogic practices on reaction time among handball players. To achieve the purpose the study, forty five handball players were selected from Alagappa University College of Physical Education, Karaikudi were randomly selected as subjects. As per the records, their age ranged from 18 to 25 years. For this study the true randomized experimental group design has been employed with three groups namely plyometric training with yogic exercises group, plyometric training without yogic exercises group and control group with 15 subjects each. Group I and II participated their respective treatments for a period of twelve weeks and no training were given to the control group. The three groups were statistically analysed by using analysis of covariance (ANCOVA). In case of significance of mean difference was observed on the criterion measure, to find out which pair of group is high among the others, as a post – hoc test, the Scheffe's test was applied. The result of the study reveals that there was a significant improvement on the reaction time when compared to the control group and plyometric training without yogic practices after the completion of twelve weeks of plyometric training programme with yogic practices.

KEYWORDS: Plyometric Training, Yogic Practices, Handball.

INTRODUCTION

Yoga typically means 'union' between the mind, body and spirit. It involves the practice of physical postures and poses, which is sometimes referred to as 'asana' in Sanskrit. As the name suggests, the ultimate aim of practicing Yoga is to create a balance between the body and the mind and to attain self-enlightenment. In order to accomplish it, Yoga makes use of different movements, breathing exercises, relaxation technique and meditation. Yoga is associated with a healthy and lively lifestyle with a balanced approach to life. The oldest physical discipline in existence known to humankind, Yoga brings stability to the body and the wavering mind. It increases the lubrication of joints, ligaments and tendons of the body. Studies in the field of medicine suggest that Yoga is the only form of physical activity that provides complete exercise to the body, because it massages all the internal organs and glands. This in turn reduces the risk of many diseases. Yoga can create a positive permanent difference to the lifestyle of anybody practicing it on a regular basis (Andre, 1987).

The game of handball is a harmonious combination between natural movements like running, throws and jumping on one hand and specific driving habits simple, accessible and attractive addition. Also handball game takes place against a background of intense physical demands, which are highly educational and formatives. (Michaela, I., 2006). Getting great performance from the athlete requires great physical effort which may lead to wear body with irreversible damage to health, especially when the preparation process, rather than being driven by scientific principles, is guided by empiricism and improvisation. Handball game belongs to the category of team sports, is a spectacular game based on the craftsmanship is

recovered within the physical, technical and mental fitness of players, held within a simple and accessible regulation, well established.

METHODOLOGY

The purpose of the study was to find out the effect of plyometric training with and without yogic practices on reaction time among handball players. To achieve the purpose the study, forty five handball players were selected from Alagappa University College of Physical Education, Karaikudi were randomly selected as subjects. As per the records, their age ranged from 18 to 25 years. For this study the true randomized experimental group design has been employed with three groups namely plyometric training with yogic exercises group, plyometric training without yogic exercises group and control group with 15 subjects each. Group I and II participated their respective treatments for a period of twelve weeks and no training were given to the control group. The three groups were statistically analysed by using analysis of covariance (ANCOVA). In case of significance of mean difference was observed on the criterion measure, to find out which pair of group is high among the others, as a post – hoc test, the Scheffe's test was applied.

RESULTS

TABLE – I
COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE ON REACTION
TIME OF PLYOMETRIC TRAINING WITH AND WITHOUT YOGIC
PRACTICES AND CONTROL GROUPS

	PTWYG	PTWOYG	Control group	Source of variance	Sum of squares	df	Mean square	F
Pre test mean	21.66	21.40	21.73	BG	0.93	2	0.46	0.07
				WG	271.86	42	6.47	
Post test mean	25.93	24.60	21.13	BG	184.17	2	92.08	9.61*
				WG	402.26	42	9.57	
Adjusted post mean	25.87	24.47	21.32	BG	162.61	2	81.30	20.27*
				WG	164.46	41	4.01	

* Significant at 0.05 level

The above table indicates the adjusted mean value of reaction time of plyometric training with yogic practice, plyometric training and control groups were 25.87, 24.27 and 21.32 respectively. The obtained F-ratio of reaction time for adjusted mean was 20.27 greater than the table value 3.22 for the degrees of freedom 2 and 41 at 0.05 level of confidence. The result of the study indicates that there was a significant difference among three groups on reaction time.

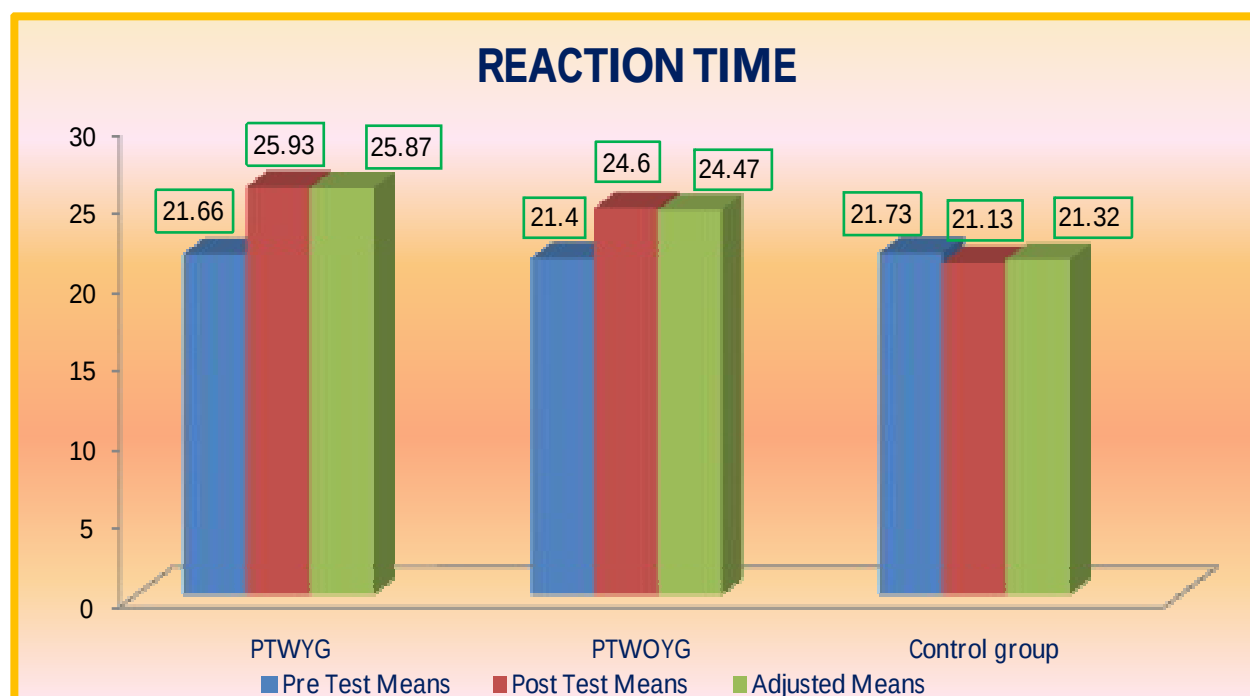
TABLE – II
SCHEFFE’S POST HOC TEST ON REACTION TIME OF PLYOMETRIC
TRAINING WITH AND WITHOUT YOGIC PRACTICES
AND CONTROL GROUPS

PTWYG	PTWOYG	Control group mean	Mean Difference	CI value
25.87	24.47	-----	1.40	1.68
25.87	-----	21.32	4.55*	
-----	24.47	21.32	3.15*	

*P < 0.05, Confidence interval value (0.05) = 1.02

The result indicating that plyometric training with yogic practice have better score than the other two groups on reaction time. The pre, post and adjusted mean values of reaction time of plyometric training with yogic practice, plyometric training and control groups are graphically represented in the Figure-I.

FIGURE – I
BAR DIAGRAM SHOWING THE MEAN VALUES ON REACTION TIME OF
PLYOMETRIC TRAINING WITH AND WITH OUT
YOGIC PRACTICES AND CONTROL GROUPS



CONCLUSION

The result of the study reveals that there was a significant improvement on the reaction time when compared to the control group and plyometric training without yogic practices after the completion of twelve weeks of plyometric training programme with yogic practices.

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