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Effect of Sand Training and Yogic Practices on Breath Holding Time among College Men Football Players

Dr. C. Kubendran

Physical Director, Govt. Hr. Sec. School, M.K.B. Nagar, Chennai, Tamilnadu, India.

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Abstract

Sports training is the overall scientific and systematic channel of preparation of sportspersons for the highest level of sports performance. The aim of sports training in competitive sports is to prepare the sportspersons for the attainment of highest possible sports performance in competition. The purpose of the study was to find out the effect of sand training and yogic practices on breath holding time among college men football players. To achieve this purpose, forty five men football players from various colleges of University of Madras were randomly selected and they were assigned into three groups namely sand training group, yogic practice group and control group. The training program was scheduled for five days a week and each training session consist of 45 minutes. Analysis of covariance (ANCOVA) statistical technique was used to test the adjusted post-test mean differences among sand training group, yogic practice group and control group and the adjusted post-test result was significant, the Scheffe's post-hoc test was used to determine the significance of the paired mean differences. Yogic practice group made significant improvement on breath holding time among college men football players due to the six weeks of yogic practices. It was concluded that yogic practices significantly improved breath holding time than sand training among college men football players.

Keywords: Sand Training, Yogic Practices, Breath Holding Time.

Introduction

Sports provide healthy and socially acceptable opportunities for the people and nations to compete against each other thereby touching heights of excellence of human endeavour and attainment (Hardayal Singh, 1991). The major objective of training is to cause biological adaptations in order to improve performance and in a specific task. This requires to follow a carefully planned training schedule. The important factors of training such as, frequency and length of the workouts, type of training, speed, intensity, duration and repetition of the activity and competition should be carefully followed (Moses, Amrit Kumar R., 1995). The aim of yoga is to integrating the body, mind and thoughts so as to work for good ends. Through systematic and regular yogic practices, our body may be made healthier and its resistance power to fight against the diseases could be enhanced, mind can get sharpened and the concentration and memory power may be developed. Yoga paves the way for an individual to do any action peacefully and perfectly. (Chandrasekaran K, 1999). Breath holding time contributes a lot in football performance. Prolonged breath holding time helps players to execute better performance for a long period. The endurance type of training will improve the breath holding time. Breath holding time is the time elapses between the completion of one inhalation and the starting of the particular exhalation (Astrand, Perolof, 1977).

Correspondence
Dr.C.Kubendran
E-mail: kube.prati@gmail.com, Ph. +9178719 59877

Purpose of the Study

The purpose of the study was to determine the effect of sand training and yogic practices on breath holding time among college men football players.

Hypothesis

It was hypothesized that the yogic practices would significantly improve the breath holding time than sand training among college men football players.

Review of Literature

Rajesh, E. Jesudin (2012) conducted a study to find out the influence of endurance training, yogic practice and combination of training on selected physical and physiological variables of soccer players. To achieve this purpose, 60 college men football players aged between 17 and 22 years from Scott Christian College, Nagercoil, Tamil Nadu were randomly selected as subjects and they were divided into four equal groups of 15 subjects each. Experimental group I was exposed to endurance training, Experimental group II was exposed to yogic practices, Experimental group III was exposed

to combined endurance and yogic practices training and Group IV was acted as control group which was not exposed to any experimental training other than their regular daily activities. The duration of experimental period was 12 weeks. Pre and post tests were conducted prior and after the 12weeks of training for all the subjects on selected physical variables such as cardiovascular endurance, flexibility, muscular endurance and physiological variables such as resting heart rate, blood pressure and breath holding time. Analysis of Covariance (ANCOVA) statistical technique was administered to find out the significance among the mean differences. If the adjusted post test result was significant, the scheffe's post hoc test was used. The results of the study was revealed that 12 weeks of endurance training, yogic practice and combined training of endurance and yogic practices significantly improved the selected physical and physiological variables namely cardiovascular endurance, flexibility, muscular endurance, resting heart rate, blood pressure and breath holding time among college men soccer players.

Methodology

To achieve the purpose of the study, forty five men football players were randomly selected in the age group of 18 to 21 years from various colleges of University of Madras. They were assigned into three groups of which one group participated in sand training, second group participated in yogic practices and the third group served as control group. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n=45) were randomly assigned into three equal groups of fifteen men each. The groups were Experimental group I assigned as sand training group, group II assigned as yogic practices group and group III as control group respectively. Pre – test was conducted for all the forty five subjects on breath holding time. The experimental groups participated in their respective sand training and yogic practices for a period of six weeks. The post-test was conducted on breath holding time after six weeks of sand training and yogic practices. The subjects were instructed to inhale deeply after which they hold their breath for a length of time possibly by them .The duration from the time of holding their breath until the movement they let the air out were clocked by using the stop watch to the nearest one tenth of a second as breath holding time. The time is recorded in seconds and the best of two trails were recorded.

Analysis of Data

Pre –test and post –test scores were statistically examined by applying Analysis of Covariance (ANCOVA) and Scheffe's Post –hoc test was used due to significant results were found. The level of confidence was fixed at 0.05 level to test the significance.

Table 1

Analysis of covariance of sand training and yogic practices on breath holding time (Score in Seconds)

	Sand Training Group	Yogic practice Group	Control Group	Sources of Variance	Sum of Squares	df	Mean squares	Obtained F-ratio
Pre – test Mean	48.01	49.34	45.98	B	163.04	2	82.01	87.59*
				W	38.97	42	0.89	
Post – test Mean	49.76	54.09	46.03	B	597.96	2	298.89	8.03*
				W	1586.06	42	38.08	
Adjusted post –test Mean	48.89	51.72	46.01	B	379.91	2	189.21	9.86*
				W	811.13	41	19.98	
Mean Gains	1.75	4.75	0.05					

Table F-ration at 0.05 level of confidence for 2 and 41 (df) = 3.22,
2 and 42 df = 3.22
* : Significant

Result and Discussions

Table 1 shows the analyzed data on breath holding time. The pre-test means of breath holding time were 48.01for sand training group, 49.34for yogic practice group and 45.98for control group. The obtained F-ratio 87.59 was greater than the table F-ratio 3.22. Hence the pre-test was significant at 0.05 level of confidence for the degrees of freedom 2 and 42. The post-test means were 49.76 for sand training group. 54.09 for yogic practice group and 46.03 for control

group. The obtained F-ratio 8.03 was greater than the table F-ratio 3.22. Hence the post-test was significant at 0.05 level of confidence for the degrees of freedom 2 and 42. The adjusted post-test means were 48.89for sand training group51.72 for yogic practice group and 46.01for control group. The obtained F-ratio 9.86 was greater than the table F-ratio 3.22. Hence the adjusted post-test was significant at 0.05 level of confidence for the degrees of freedom 2 and 41. The mean gains of sand training group, yogic practice group and control group were 1.75, 4.75 and 0.05 respectively.

Table 2

Scheffe' post-hoc test for the differences among the adjusted means of sand training group, yogic practices group and control group on breath holding time (Scores in Seconds)

Sand Training Group	Yogic practice Group	Control Group	Mean Difference (MD)	C.I Value
48.89	51.72		2.83	
48.89		46.01	2.88	
	51.72	46.01	5.71*	4.06

* : Significant

Table 2 shows the scheffe's post-hoc test of ordered adjusted final mean difference of breath holding time for different groups. The differences between the control group and sand training group was 2.88, control group and yogic practice group was 5.71 and sand training group and yogic practice group was 2.83. Hence the third group comparison was significant and first and second comparisons were insignificant. The analysis of covariance of breath holding time indicated that there was significant improvement on breath holding time among college men football players due to the six weeks of yogic practices. Further findings of the study showed that the control group did not improve the breath holding time. However, the yogic practice group had more effect on the improvement of breath holding time than the sand training group and control group. The findings of this study are in agreement with the theoretical knowledge cited in respect of sand training and yogic practices.

Conclusion

It was concluded that yogic practices significantly improved the breath holding time than the sand training among college men football players.

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