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Effects of skill training with and without pranayama practices on speed and agility among soccer players

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Abstract

The purpose of the study is to find out the effects of skill training with and without pranayama practices on speed and agility among soccer players. To achieve the purpose of the study, 45 male soccer players were selected from VIT, Vellore, Tamil Nadu, India and their age ranged from 18 to 22 years. The selected subjects were randomly assigned into three groups of (n=15) each, such as two experimental group and a control group. Group I (n=15) underwent skill training with pranayama practice, Group II (n=15) underwent skill training without pranayama practice and Group III (n=15) acted as control group for a duration of 12 weeks and the number of sessions per week was confined to three alternative days. Speed and agility were selected as dependent variables. To measure the selected dependent variables 50 metre run and shuttle run test were used. Pre and post-tests randomized control group design was used as experimental design. The collected data from the subjects were analysed with paired sample t-test and analysis of covariance (ANCOVA) at .05 level of significance. It was concluded that the speed and agility had significantly improved due to skill training with and without pranayama practice. Skill training with pranayama practice had better performance than skill training without pranayama practice group on speed and agility.

Keywords: Skill training, pranayama, football, speed and agility

Introduction

Soccer is a game of physical and mental challenges. You must execute skilled movements under generalized conditions of restricted space, limited time, physical and mental fatigue and opposite players (Luxbacher, 2013) [1]. The skills involved in the game are simple, natural and yet are highly stimulating and satisfying to anyone who participates in the game (Thomas, 1964) [2].

The term “yoga” and the English word “yoke” are derived from Sanskrit root “yuj” which means union. Yoga is a psycho-somatic-spiritual discipline for achieving union & harmony between our mind, body and soul and the ultimate union of our individual consciousness with the Universal consciousness (Madanmohan, 2008) [4].

Yoga is a method of learning that aims to attain the unity of mind, body, and spirit through these three main Yoga structures: Exercise, Breathing, and Meditation. The Breathing Techniques are based on the concept that breath is the source of life in the body (Mishra, Pandey, & Dubey, 2014) [3].

The Prayama training makes use of the diaphragm fully by drawing into the lowest and largest part of the lungs. Due to the regular practice of the Pranayama, breathing is so simple and so obvious that we often take it for granted ignoring the power it has to affect body, mind and spirit. It is believed that Pranayama practices can do a lot on the different physical, physiological and psychological components of human body (Kanniyan, 2014) [5].

Purpose of the Study

Purpose of the present study was to find out the effects of low vs moderate intensity physical activity on selected physical variables among sedentary individuals.

Methodology

To achieve the purpose of the study, 45 male soccer players were selected from VIT, Vellore, Tamil Nadu, India and their age ranged from 18 to 22 years.

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shuttle run test were used. Pre and post-tests randomized control group design was used as experimental design. The collected data from the subjects were analysed with paired sample t-test and analysis of covariance (ANCOVA) at .05 level of significance.

Analysis of Data

The collected data were analyzed and presented in the table given below.

Table 1: Summary of the Mean, and dependent t-test on speed and agility between pre and post-tests of experimental and control groups among Soccer players

Variables	Test	Skill training with pranayama		Skill training without pranayama		Control group	
		Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Speed	Pre test	7.86	0.16	7.85	0.12	13.53	0.22
	Post test	7.10	0.13	7.47	0.12	13.47	0.31
	t-test	14.77*		9.67*		0.76	
Agility	Pre test	13.67	0.18	13.59	0.29	13.53	0.22
	Post test	12.05	0.22	12.92	0.18	13.47	0.31
	t-test	23.20*		8.13*		1.43	

*Significance level at 0.05 with df t (14) is 2.15

Table 1 shows that the t-test values of skill training with and without pranayama practices groups between pre and post tests on speed is 14.77 and agility is 9.67, which are greater than the table t-value of 2.14 with df 14 at .05 level of

significance. This means that the experimental groups had significant improvement on speed and agility. However, Control group had no significant improvement on selected dependent variables.

Table 2: Summary of the adjusted post-test mean values and F-ratio on speed and agility between experimental and control groups among Soccer players

Variable	Adjusted post mean			Source of variance	Sum of Squares	df	Mean Square	F
	Skill training with pranayama	Skill training without pranayama	Control group					
Speed	7.11	7.48	7.95	between	5.01	2	2.51	181.
				within	0.57	41	0.01	55*
Agility	12.02	12.93	13.49	between	15.52	2	7.76	150.
				within	2.11	41	0.05	59*

*Significance level at 0.05 with df f (2, 41) is 3.23

The above table shows that the obtained F-ratio values for speed is 181.55 and agility is 150.59 respectively. Which is greater than the tabulated F-value of 3.23 with df 2, 41. It indicates that there was a significance difference among

experimental and control groups on speed and agility of Soccer players. To find out the paired mean differences, the Scheffe’s test was used as post hoc test and the results were presented in table 3.

Table 3: Scheffe’s post hoc test on speed and agility among experimental and control groups among Soccer players

Variable	Skill training with pranayama	Skill training without pranayama	Control group	Mean Difference	CI
Speed	7.11	7.48		0.37*	0.09
	7.11		7.95	0.85*	
		7.48	7.95	0.48*	
Agility	12.02	12.93		0.90*	0.21
	12.02		13.49	1.47*	
		12.93	13.49	0.57*	

Table 3 shows that, the adjusted post-test mean difference on speed and agility between skill training with and without pranayama practices groups; skill training with pranayama practice and control groups; skill training without pranayama practice and control groups are greater than the confidence interval value, which shows that there was significance difference among skill training with and without pranayama practices groups; skill training with pranayama practice and control groups; skill training without pranayama practice and control groups on speed and agility. However, it was found that skill training with pranayama practices group improved the selected dependent variables such as speed and agility better than skill training without pranayama practice and control groups.

Discussion on Findings

The results of the study indicates that the experimental groups had significant improvement on speed and agility. However, Control group had no significant improvement on selected dependent variables. However, it was found that skill training with pranayama practices group improved the selected dependent variables such as speed and agility better than skill training without pranayama practice and control groups. The results of this study are also supported by the following research studies conducted earlier with one and other dependent and independent variables. According to Kanniyar, (2014) [5] examined that the Agility, speed, endurance and power impact of Pranayama practices on sedentary males. After careful analysis of the available data, it could see

that the experimental group had significantly improved on the performance of dependent bio- motor variables Speed, Explosive Power, Cardio Respiratory Endurance, and Agility. Singh, Singh, & Gaurav, (2011) ^[6] assessed the effects of 6-weeks yogasanas training on agility and muscular strength in sportsmen. A group thirty randomly selected male players. The yoga asana training may be recommended to improve agility and muscular strength. And may contribute to enhance sports performance.

Nair, & Nalawade, (2019) ^[7] Know the effect of 4 weeks of pranayama on reaction time (auditory and visual), agility and the cardiorespiratory functions. The study shows that short term practice of pranayama is beneficial in improving reaction time, agility

Conclusions

1. That the Skill training with pranayama practice had significant improvement on speed and agility.
2. That the Skill training without pranayama practice had significant improvement on speed and agility.
3. However, Control group had no significant improvement on selected dependent variables.
4. Also it was found that skill training with pranayama practices group improved the selected dependent variables such as speed and agility better than skill training without pranayama practice and control groups.

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