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Effect of Sprint Strength Training on Physiological Parameters of Male Hockey Players

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ABSTRACT

Sprints build up muscles in a few different ways. They activate fast-twitch fibers, work out the central nervous system (CNS) by firing off motor neurons at a high rate and act as a type of resistance training. Sprinters must use as much force as they can to overcome gravity and move from one step to another. The present study is investigated to the effect of sprint strength training on physiological parameters of male hockey players. The research scholar review of literature the available pertaining to the Sprint strength training, from books, journals, periodicals, magazines and research papers. There were studies proved that the Sprint strength training had positive effects on certain game performance related component in resting heart rate of college level hockey players. The age group 20 – 25 and selected Chennai region, Tamilnadu, India school level hockey players. Statistically significant improvements in standard scores in resting heart rate was comparable between the three groups of hockey players. Resting heart rateimproved by 9.25 in Sprint strength group, 9.50 in the control group. The research on short - duration intervention in establishment players may help to organize the role of Sprint strength in conventional hockey players to maintain proper alignment and posture during movement for training.

KEY WORDS: Physical fitness, resting heart rate, Sprint strength training

INTRODUCTION

Sprints are high-intensity, short bursts of activity, performed at great speed and one of the most effective forms of training possible for building strength, speed and power whilst developing lean muscle mass and losing fat. Primary Muscle

Unilateral movements like lunges, rear foot elevated split squats, and single leg RDL's are more effective than regular squats and deadlifts when it comes to developing your sprinting speed.

As sprinting is an anaerobic exercise, it helps in build muscles in the same way that weight training does. However, while weight training you focus on one body part at a time. Sprinting, on the other hand, uses dozens of muscles at the same time, making it one of the most complete muscle training exercises available.

METHODOLOGY

The Methodology for the present investigation is on the effect of Sprint strength training on performance related component in resting heart rate of hockey players**.** The purpose of study 30 male hockey students selected from various schools in Chennai district, TamilNadu. Their age ranges between 20 to 25 years .the subjects were randomly assigned into two groups, namely experimental group I (Sprint strength training) and control group. In order to make sure the full cooperation from the subjects, the scholar had a meeting with them and explained the purpose of the research. It was made clear by explanation in order to ascertain that there was no uncertainty among the players regarding the effort, which they had to put in for the successful completion of this study. Experimental group I participated for a period of eight weeks Sprint strength training and control group have no any specific training. The subjects were tested on selected criterion variable of resting heart rate before the training and after 8 weeks of training.

TRAINING PROCEDURE

Experimental Group-I undertake Sprint strength training and the control group was un explored to any specific training programme. The experimental treatments namely Sprint strength training was administrated for duration of eight weeks and the number of session per week was confined to three alternative days and each session lasted 60 minutes.

STATISTICAL TECHNIQUE

The collected data from the two groups prior to and after the experimental treatments on selected variables was resting heart rate were statistically analyzed by using the statistical technique of analysis of covariance (ANCOVA). Whenever the 'F' ratio for adjusted post-test means was found to be significant, scheffe's post hoc test was followed as a post hoc test to determine which of the paired means difference was significant. In all the cases 0.05 level of confidence was fixed as a level of confidence to test the hypotheses.

RESULTS AND ANALYSIS

The influence of independent variables on each of the criterion variables is analyzed and presented below.

The training period was limited to eight weeks. The dependent variables selected for this study was health related variable of resting heart rate. All the subjects were tested prior to and immediately after the experimental period on the selected dependent variables.

The data obtained from the experimental groups before and after the experimental period were statistically organized with dependent 't'-test and Analysis of covariance (ANCOVA). Whenever the 'F' ratio for adjusted post-test means was found to be outstanding performance study. The Scheffe's Post hoc test was organised to determine the paired mean differences. The level of confidence was fixed at 0.05 level for all the cases.

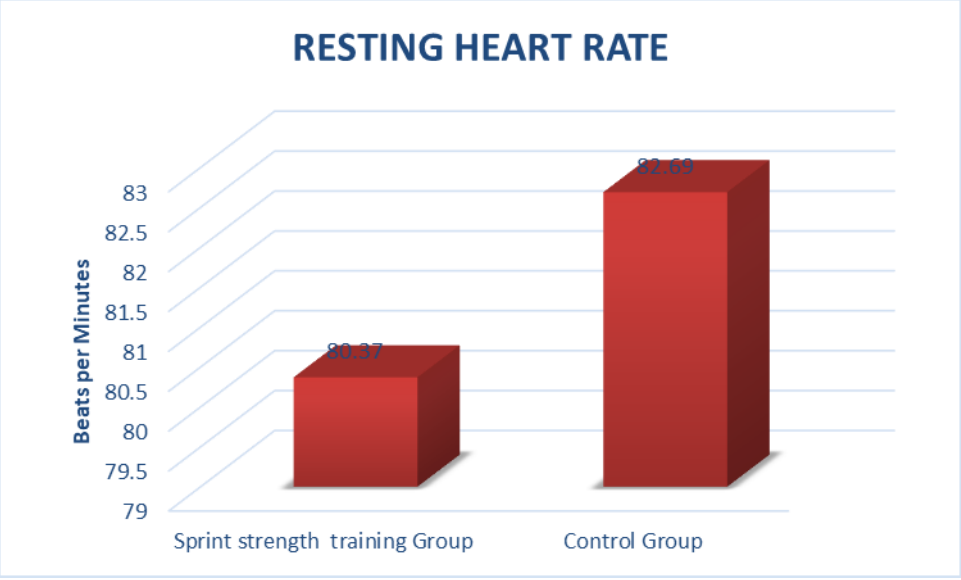
TABLE – 1

ANALYSIS OF COVARIANCE AMONG SPRINT STRENGTH TRAINING GROUP I AND CONTROL GROUP ON RESTING HEART RATE

	Sprint strength training Group	**Control Group**	**Source of Variance**	**Sum of square**	**df**	**Mean square**	**F-value**
Pre test Mean	82.93	83.60	Between	3.333	1	3.333	0.69
			Within	134.53	28	4.80	
Post test Mean	80.06	83.00	Between	64.53	1	64.53	13.80*
			Within	130.93	28	4.676	
Adjusted post mean	80.37	82.69	Between	39.342	1	39.342	64.30*
			Within	16.519	27	0.612	

FIGURE – 1

THE ADJUSTED POST TEST MEAN VALUES OF SPRINT STRENGTH TRAINING GROUP I AND CONTROL GROUP ON RESTING HEART RATE



CONCLUSION

The findings of the study showed that there was a statistically significant improvement in the health related variable of resting heart rate as compared to control group.

The results of the study shows that the experimental group-I that had undergone Sprint strength training group, improved health related variable in resting heart rate of hockey players.

RECOMMENDATIONS

It is recommended that coaches and physical educators in the game of hockey should give due to include Sprint strength training in their training schedules.

In the physical exercise, while designing the training programme the effect of varied training modalities is explained on positively on physical fitness parameters and skill performance variables of hockey players, the physical education teachers and coaches can prefer this type of training so as to achieve aim in time.

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