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Dr. NS Gnanavel

Assistant Professor, Mother
Teresa College of Physical
Education, Mettusalai, Illuppur,
Pudukkottai, Tamil Nadu, India

Dr. K Venkatesan

Assistant Professor,
Dhanalakshmi Srinivasan
College of Physical Education,
Perambalur, Tamil Nadu, India

Impact of core with speed training on inspiratory reserve volume expiratory reserve volume among male kabaddi players

Dr. NS Gnanavel and Dr. K Venkatesan

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Abstract

The purpose of the study is to find out the impact of core with speed training on inspiratory reserve volume, expiratory reserve volume among male kabaddi players. To achieve the purpose of the present study thirty male kabaddi players studying in various departments and colleges of Dhanalakshmi Srinivasan group of institutions, Perambalur, Tamil Nadu, in the age group of 18 - 25 years were selected as subjects. They were divided into three groups, in which, Group - I (n=15) underwent core with speed training, group - II (n=15) acted as control, who did not participate any special training apart from their regular routine activities. Prior to and after the exercises period the subjects were tested for inspiratory reserve volume and expiratory reserve volume. Inspiratory reserve volume and expiratory reserve volume was measured by Wet spirometer. Analysis of covariance (ANCOVA) was applied to know the significant mean difference between experimental and control group on inspiratory reserve volume and expiratory reserve volume. It is concluded that twelve weeks of core with speed training showed an impact on inspiratory reserve volume and expiratory reserve volume in experimental group.

Keywords: Core with speed training, Kabaddi, inspiratory reserve volume and expiratory reserve volume

Introduction

The lumbo-pelvic-hip complex and/or transversus abdominis muscles, which are essential for posture and lumbar spine stabilization, are developed gradually with core exercise. In speed training, moving swiftly is often required.

Speed training includes activities like running and other fast movements. Speed is the ability to move limbs swiftly for catching or throwing, or to quickly cover ground.

In Asia's tropical nations, kabaddi is mostly an outdoor team sport. Other Asian nations have adapted this game that is native to India. The sport demands a significant degree of presence of mind, agility, muscle coordination, breath holding capacity, explosive power, upper and lower body strength, speed, aerobic and anaerobic endurance, flexibility, and core strength.

Statement of the problem

The purpose of present study was to find out impact of core with speed training on inspiratory reserve volume, expiratory reserve volume among male kabaddi players.

Methodology

The purpose of the study is to find out the impact of core with speed training on inspiratory reserve volume, expiratory reserve volume among male kabaddi players. To achieve the purpose of the present study thirty male kabaddi players studying in various departments and colleges of Dhanalakshmi Srinivasan group of institutions, Perambalur, Tamil Nadu, in the age group of 18 - 25 years were selected as subjects. They were divided into three groups, in which, Group - I (n=15) underwent core with speed training, group - II (n=15) acted as control, who did not participate any special training apart from their regular routine activities. Prior to and after the exercises period the subjects were tested for inspiratory reserve volume and expiratory reserve volume. Inspiratory reserve volume and expiratory reserve volume was

Corresponding Author:

Dr. K Venkatesan

Assistant Professor,
Dhanalakshmi Srinivasan
College of Physical Education,
Perambalur, Tamil Nadu, India

measured by Wet spirometer. Analysis of covariance (ANCOVA) was applied to know the significant mean difference between experimental and control group on inspiratory reserve volume and expiratory reserve volume.

Analysis and interpretation of data

The data collected prior to and after the experimental periods on inspiratory reserve volume and expiratory reserve volume on core with speed training and control group were analyzed and presented in the following Table 1.

Table 1: Analysis of covariance of inspiratory reserve volume and expiratory reserve volume on core with speed training and control group

Variable Name	Group Name	Experimental Group	Control Group	'F' Ratio
Inspiratory Reserve Volume	Pre-test Mean \pm S.D	2.62 \pm 1.32	2.63 \pm 1.82	0.965
	Post-test Mean \pm S.D.	2.64 \pm 0.85	2.69 \pm 1.52	06.58*
	Adj. Post-test Mean \pm S.D.	2.63	2.67	56.12*
Expiratory Reserve Volume	Pre-test Mean \pm S.D	2.54 \pm 1.40	2.54 \pm 1.65	0.985
	Post-test Mean \pm S.D.	2.56 \pm 1.45	2.64 \pm 1.99	6.15*
	Adj. Post-test Mean \pm S.D.	2.55	2.59	54.28*

* Significant at 0.05 level of significance.

(The table value required for significance at 0.05 level of significance with DF 1 and 28 and 1 and 27 were 4.196 and 4.210 respectively).

Table 1 showed that the pre-test and S.D values of inspiratory reserve volume for core with speed training and control group were 2.62 \pm 1.32 and 2.63 \pm 1.82. The obtained 'F' ratio value of 0.965 for pre-test score of core with speed training and control group on inspiratory reserve volume was less than the required table value of 4.196 for significance with DF 2 and 28 at 0.05 level of confidence.

The post-test and S.D values of inspiratory reserve volume for core with speed training control group were 2.64 \pm 0.85 and 2.69 \pm 1.52 respectively. The obtained 'F' ratio value of 6.58 for post-test score of core with speed training and control group on inspiratory reserve volume was greater than the required table value of 4.196 for significance with DF 2 and 28 at 0.05 level of confidence.

The adjusted post-test mean value of inspiratory reserve volume for core with speed training and control group were 2.63 and 2.67 respectively. The obtained 'F' ratio value of 56.12 for adjusted post-test score of core with speed training and control group was more than the required table value of 4.210 for significant with DF 2 and 27 at 0.05 level of confidence.

Table- I showed that the pre-test and S.D values of expiratory reserve volume for core with speed training and control group were 2.54 \pm 1.40 and 2.54 \pm 1.65. The obtained 'F' ratio value of 0.985 for pre-test score of core with speed training and control group on expiratory reserve volume was less than the required table value of 4.196 for significance with DF 2 and 28 at 0.05 level of confidence.

The post-test and S.D values of expiratory reserve volume for core with speed training control group were 2.56 \pm 1.45 and 2.64 \pm 1.99 respectively. The obtained 'F' ratio value of 6.15 for post-test score of core with speed training and control group on expiratory reserve volume was greater than the required table value of 4.196 for significance with df 2 and 28 at 0.05 level of confidence.

The adjusted post-test mean value of expiratory reserve volume for core with speed training and control group were 2.55 and 2.59 respectively. The obtained 'F' ratio value of 54.28 for adjusted post-test score of core with speed training and control group was more than the required table value of 4.210 for significant with DF 2 and 27 at 0.05 level of confidence.

Conclusions

Within the limitations and delimitations of this study the following conclusions were drawn from the result.

1. It was concluded that there was significant development of inspiratory reserve volume and expiratory reserve

volume among kabaddi players due to core with speed training.

2. The result of the study reveal that core with speed training group have better development of inspiratory reserve volume and expiratory reserve volume when compared with control group.

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