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Impression of core training on selected biological variables resting pulse and respiratory rate among college level men soccer players

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Abstract

For this exploration to assess "Impact of core training on selected resting pulse and respiratory rate variables among college level men soccer players". In this research twelve men football players who are all studying college level were selected and based on their playing ability, as well who are all participated in district /inter collegiate level football tournament) as a subjects for this study, from Pondicherry university. Since this investigation involved following variables such as resting pulse rate and respiratory rate. The subject's age ranged from 18 – 28 years as per their college/university records. The subjects were underwent CORE training in the period of 12 weeks. The training was applied for 3 days per week one session 45- 90 minutes programme evening session. The data were collected from experimental group men soccer players such as resting pulse rate and respiratory rate variables before and after the implication of CORE training. The collected data were analyzed with paired 't' test for evaluating the impact of 12 weeks CORE training. Results; The selected core training group showing affirmative changes on the variable of resting pulse rate but there is no significant difference between pre & post- test performances on the variable of respiratory rate.

Keywords: Core training, resting heart rate and respiratory rate

Introduction

Core training exercises are most popular in all sports and games especially strength and endurance based activities. Related to core training several research had been done as well attempt to analyse core exercises effect to various point of view such as physical, physiological, bio chemical and so on., in that most of the research showed positive impact to selected subjects from various sports and games (Casey A reed, 2012). In this investigation researcher focused to inquire, how for core training influence respiratory and resting heart rate to college level men football players. While perform core exercises most of the core muscles are involving repeat and steady, because of this activity there will be an oxygen demand. Since for supply enough oxygen, consumption of oxygen will be high and the resting heart rate will may be decrease through adaptation of core exercise programme. In this exploration to identify above said process and influence of football players performances in various aspect by investigator.

Objective

In this study is to identify "Impact of core training on selected resting pulse and respiratory rate variables among college level men soccer players".

Hypotheses

In this study hypothesis were framed there would be a significant development because of twelve weeks core training programme on the variables of resting pulse rate and respiratory rate to selected men soccer players group.

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Methodology

In this study the following testing procedure were followed for collection of data from selected subjects before and after given experimental training. In this research twelve college level men football players were selected and based on their playing ability, as well who are all participated in district /inter collegiate level football tournament as a subjects for this study, from Pondicherry University. Since this exploration involved selected variables such as resting pulse rate and respiratory rate. The subject’s age ranged from 18 – 28 years as per their college/university records. The subjects were underwent CORE training such as [Plank, side plank, bridge and side lying hip abduction, oblique crunch straight leg raise, cycling and lying wind screen wipers with various intensity] in the period of 12 weeks. The framed experiment was applied for 3 days per week one session 45- 90 minutes programme evening session. The data were collected from experimental group college level men soccer players, for following variables such as resting pulse rate (Stethoscope) and respiratory rate (Manual) before and after the implement of CORE training. The collected data were analysed with paired ‘t’ test The significance level was fixed at 0.05 confidences with degrees of freedom 1&11, for evaluating the impact of 12 weeks CORE training experiment to selected soccer players.

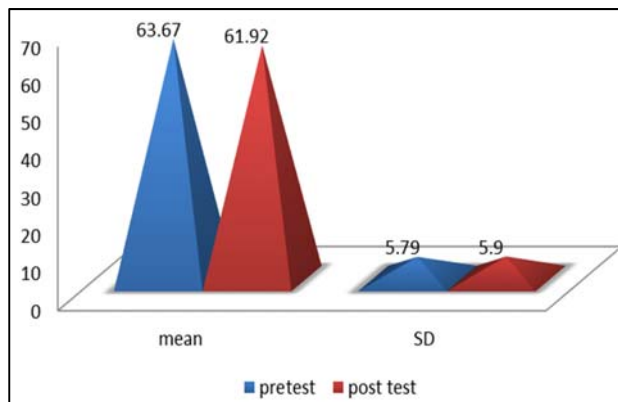
Data analyzing and interpretation

Table 1: Pre and Post- Test Mean, Standard Deviation, Standard Error Mean and ‘T’ Ratio on the Variable of Resting Pulse Rate

TEST	MEAN	S.D	SEM	N	‘t’ Ratio	df
Pre test	63.67	5.79	1.67	12	3.169*	11
Post test	61.92	5.90	1.70	12		

*Significant difference degrees of freedom 1 & 11 table value is – 2.201

Paired ‘t’ test Table-I showing the results of mean, SD and ‘t’ ratio values of resting pulse rate variable likewise the mean values are 63.67 for pre-test, 61.92 for post- test moreover the SD values are 5.79 pre-test, 5.90 post- test and the calculated ‘t’ value 3.169 is higher than table value 2.201 at the significant level of 0.05 with degrees of freedom 1 & 11. Hence investigator asserts that there is a significant deviations between pre-test and post-test performance on the variable of resting pulse rate for selected college level men soccer players.



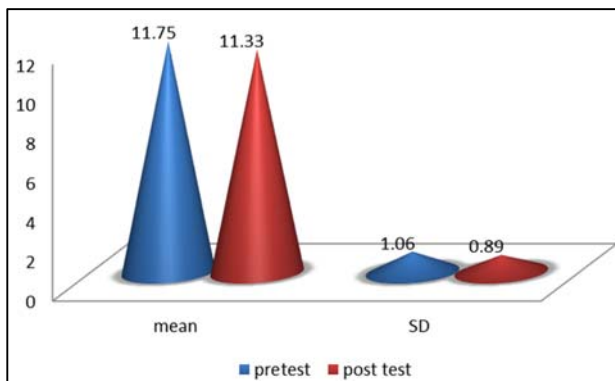
The diagram showing the results of mean and standard deviation on the variable of resting pulse rate

Table 2: Pre and Post- Test Mean, Standard Deviation, Standard Error Mean and ‘T’ Ratio on the Variable of Respiratory Rate

TEST	MEAN	S.D	SEM	N	‘t’ Ratio	df
Pre test	11.75	1.06	0.305	12	1.603	11
Post test	11.33	0.89	0.256	12		

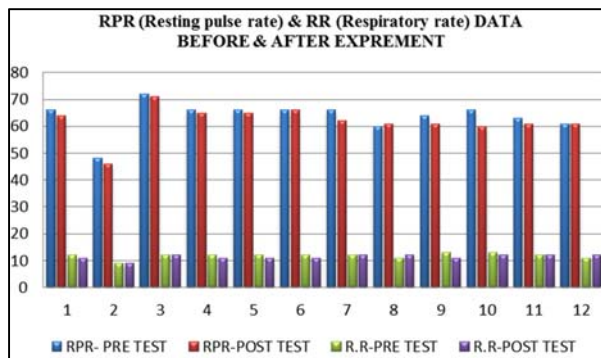
*Significant difference degrees of freedom 1 & 11 table value is – 2.201

Paired ‘t’ test Table-I showing the results of mean, SD and ‘t’ ratio values of resting pulse rate variable likewise the mean values are 11.75 for pre-test, 11.33 for post- test moreover the SD values are 1.06 pre-test, 0.89 post- test and the calculated ‘t’ value 1.603 is higher than table value 2.201 at the significant level of 0.05 with degrees of freedom 1 & 11. Therefore researcher declares that there is no significant difference between pre-test and post-test performance on the variable of respiratory rate for selected college level men soccer players groups.



The diagram showing the results of mean and standard deviation on the variable of respiratory rate

Data for resting pulse rate and respiratory rate performance for selected college level men soccer players before and after implement of core training



Results

Diagram -3 presenting resting pulse rate & respiratory rate before & after completion of core training. Above picture showing, out 12 samples most of them are showing positive changes means they have shown after completion of core training their resting pulse rate has been reduced because quantity of blood supply (Stock volume) has been increased for each heart beat that is the reason it is happening, except 6 and 12th samples were maintaining same performance there are no changes. Hence majority of samples are showing positive changes almost 83.3%, so researcher declaring that

the given core training is influenced the selected me soccer players in the variable of resting pulse rate, moreover in respiratory rate variable the selected samples were showing slight changes but when considering all samples there is no significant (positive changes). Hence the researcher concluded that the session / training duration may not enough to influence selected variable moreover if we add some more variety of core exercise or other training may helpful to influence positively on the variable respiratory rate. This study may helpful for all categories of soccer players as well other sports and games personalities to enhance their performance.

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