



STUDY OF ENDURANCE RUNNING IMPACT ON RESTING PULSE RATE AND VO₂ MAX PERFORMANCE AMONG COLLEGE MEN STUDENT

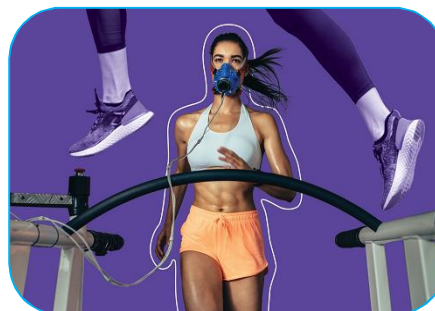
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ABSTRACT :

The study was to discover the application of 18-weeks endurance running impact on resting pulse rate and VO₂ max performance among college students. Total N=25 (twenty five) college men students participated and their age period ranged from 18 years to 25 years as per subject's school records. The selected men students treated with endurance running for duration of 18-weeks, three sessions in a week and 60-minutes each session. The measurement of resting pulse rate and VO₂ max performance scores was collected through pulse rate of radial artery of the wrist (numbers) and Copper's test (ml) before and after the completion of specific training. The collected scores were analyzed through paired 't' test and level of significant was restricted at 0.05 levels. The study found that eighteen weeks of endurance running found effective for significant improvement in resting pulse rate and VO₂ max performance among college students.



KEYWORDS : endurance, running, resting pulse rate, VO₂max and copper's test.

INTRODUCTION

Continuous training involves long, slow distance exercises. It performed at a constant rate without rest. Training at first should be at 60% of maximum heart rate, increasing to 75-80% of maximum heart rate (progression). If performed correctly continuous training improves cardiovascular and muscular stamina.

Fartlek is a swedish word meaning speed play. In this form of training the intensity and types of exercises are varied. This is done by changing the pace, terrain and style of training. This form of running gives athletes a lot of training over far greater than their competitive distance. Interval training is an alternate fast and slow training schedule performed over measured distances. The fast section involve periods of intense work. The slow or recovery periods involve either rest or very light exercises in which the oxygen debt built up during the fast phase can be repaid.

STATEMENT OF THE RESEARCH PROBLEM:

To evaluate the "Study of endurance running impact on resting pulse rate and VO₂ max performance among college students".

OBJECTIVES OF THIS RESEARCH STUDY

1. To evaluate the 18-weeks influence of endurance running impact on resting pulse rate among college students.
2. To evaluate the 18-weeks influence of VO₂ max performance among college students".

RESEARCH HYPOTHESIS:

- There will be a significant improvement in score of resting pulse rate performance of college students after the eighteen weeks impact of endurance running when compared between pretest and post test scores.
- There will be a significant improvement in score of VO₂ max performance of college students after the eighteen weeks impact of endurance running when compared between pretest and post test scores.

METHODOLOGY:

The study was to discover the application of 18-weeks endurance running impact on resting pulse rate and VO₂ max performance among college students. Total N=25 (twenty five) college men students participated and their age period ranged from 18 years to 25 years as per subject's school records. The selected men students treated with endurance running for duration of 18-weeks, three sessions in a week and 60-minutes each session. The measurement of resting pulse rate and VO₂ max performance scores was collected through pulse rate of radial artery of the wrist (numbers) and Copper's test (ml) before and after the completion of specific training. The collected scores were analyzed through paired 't' test and level of significant was restricted at 0.05 levels

Table: I

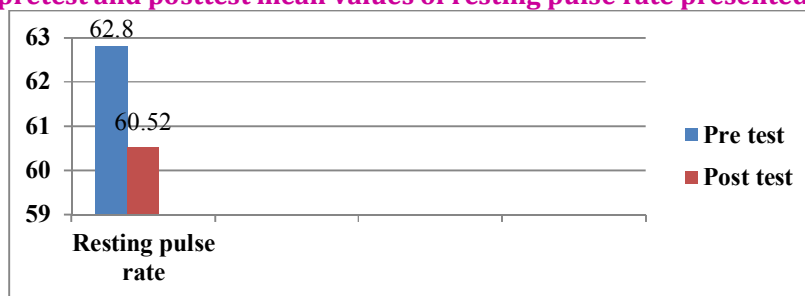
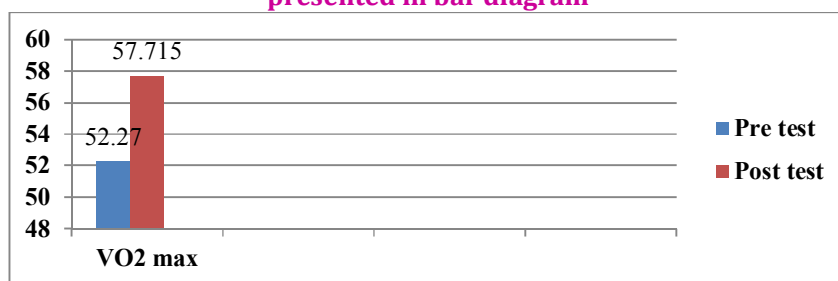
Descriptive statistics of mean, standard deviation and calculated paired 't' test values resting pulse rate and VO₂ max performance of the college students

Training Groups	Pre test		Post test		't' Ratio
	Mean	SD	Mean	SD	
Resting pulse rate	62.800	1.118	60.520	0.918	13.529*
VO ₂ max	52.270	9.572	57.715	8.211	4.281*

Table 't' book value at 0.05 level (df) 24 = 2.064, * Significant & NS: Not Significant)

In table-I, shows the pretest mean values on the resting pulse rate and VO₂ max performance are 62.800 and 52.270 respectively. Posttest mean values on the resting pulse rate and VO₂ max performance are 60.520 and 57.715. The calculate 't' ratio values are 13.529 and 2.865 and the corresponding table 't' value at 0.05 confidence level degree of freedom book value at 24 is 4.281. Comparison of pretest and post test scores as for 't' ratio numbers are greater than tabular value Therefore statistical analysis noted significant changes occurred in paired sample t-test.

The resting pulse rate and VO₂ max performance of pretest and post test results presented in bar diagram figure: 1 and 2

Figure: 1 The pretest and posttest mean values of resting pulse rate presented in bar diagram**Figure: 2 The pretest and posttest mean values of VO₂ max performance presented in bar diagram****DISCUSSION ON HYPOTHESIS:**

- The first hypotheses stated that there will be a significant improvement in score of resting pulse rate performance of college students after the eighteen weeks impact of endurance running when compared between pretest and post test scores. The statistical analysis proved that endurance running significantly improved the resting pulse rate post scores. Hence research first hypothesis accepted.
- The second hypotheses stated that that there will be a significant improvement in score of VO₂ max performance of college students after the eighteen weeks impact of endurance running when compared between pretest and post test scores. The statistical analysis proved that endurance running significantly improved the VO₂ max performance post scores. Hence research second hypothesis accepted.

DISCUSSION AND FINDINGS:

The impact of 18-weeks of endurance running improved the performance of the resting pulse rate and VO₂ max performance of college student. The referred study results on resting pulse rate and VO₂ max performance are *Abdurrahman Boyaci and Murat Tutar (2018)*, *Dhivyalaxmi. S and K. Murugavel. K (2013)*, *Gokula, Krishnan D., and Pushparajan, A. (2014)*, *Hamid Arazi, Abbas Asadi, Mehdi Rahimzadeh and Amir-Hossein Moradkhani (2013)*, *Lamina S, Okaye G, Ezema C, Ezugwu A and Anele. T (2013)*, *Senthil Kumar. C (2016)*, *Thingnam Nandalal Singh and Bhupinder Singh (2015)* and *Vishnu Raj R (2017)*.

CONCLUSIONS:

The study determined that impact of 18-weeks of endurance running significantly improved the resting pulse rate and VO₂ max performance of college students. Therefore author recommended to physical fitness trainer to implement various method of endurance running for improving physiological parameters of students in schools and colleges.

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