

EFFECT OF RESISTANCE TRAINING WITH DIFFERENT INTENSITY ON BMI AMONG COLLEGE STUDENTS

Dr. M.GOVINDARAJ

Director of Physical Education, Pavendar Bharathidasan College of Engineering and Technology, Tiruchirappalli, Tamilnadu.

ABSTRACT

The purpose of the study was to find the effect of resistance training with different intensity on BMI among college students. To achieve the purpose of the present study, forty five college students from Tiruchirappalli, Tamilnadu were selected as subjects at random and their ages ranged from 18 to 25 years. The subjects were divided into three equal groups of fifteen each. Group I acted as Experimental Group I (RTWHIG), Group II acted as Experimental Group II (RTWLIG) and Group III acted as Control Group. The requirement of the experiment procedures, testing as well as exercise schedule was explained to the subjects so as to get full co-operation of the effort required on their part and prior to the administration of the study. Analysis of covariance (ANCOVA) was applied and whenever the adjusted post-test means were found significant, the Scheffe's post-hoc test was administer to find out the paired means difference. To test the obtained results on variables, level of significance 0.05 was chosen and considered as sufficient for the study. The RTWHIG and RTWLIG had shown significant differences in BMI among college students than the control group. The RTWHIG had produced significant differences in BMI among college students than the RTWLIG.

KEYWORDS: Resistance Training, BMI, College Students.

INTRODUCTION

Resistance training increases muscle strength by pitting muscles against a resistance. A rubberized band can even be used. Resistance training can increase muscle strength and bone density and reduce body fat. Resistance training, also called weight training is pitting muscles against a resistance such as a weight or other type of resistance, to build the strength, anaerobic endurance and increase size of skeletal muscles. A well rounded program of physical activity includes strength training, to improve bone, joint function, bone density, muscle, tendon and ligament strength, as well as aerobic exercise, to improve our heart and lung fitness. These activities should work all the major muscle groups of our body. Full range of motion is important in resistance training because muscle overload occurs only at the specific joint angles where the muscle is worked (Baechle, 1994).

METHODOLOGY

The purpose of the study was to find the effect of resistance training with different intensity on BMI among college students. To achieve the purpose of the present study, forty five college students from Tiruchirappalli, Tamilnadu were selected as subjects at random and their ages ranged from 18 to 25 years. The subjects were divided into three equal groups of fifteen each. Group I acted as Experimental Group I (RTWHIG), Group II acted as Experimental Group II (RTWLIG) and Group III acted as Control Group. The requirement of the experiment procedures, testing as well as exercise schedule was explained to the subjects so as to get full co-operation of the

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RESULTS

TABLE – I
COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE ON BMI OF RTWHIG, RTWLIG AND CONTROL GROUP

	RTWHIG	RTWLIG	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	23.93	24.08	24.20	BG	0.53	2	0.26	1.65
				WG	6.81	42	0.16	
Post Test Mean	20.73	22.25	24.04	BG	82.11	2	41.05	142.14*
				WG	12.13	42	0.28	
Adjusted Post Test Mean	20.75	22.25	24.02	BG	74.86	2	37.43	127.39*
				WG	12.04	41	0.29	

* Significant at 0.05 level Table value for df 2, 42 was 3.21 and 2, 41 was 3.22

The above table indicates the adjusted mean value of BMI of experimental RTWHIG, experimental RTWLIG and control group were 20.75, 22.25 and 24.02 respectively. The obtained F-ratio of 127.39 for adjusted mean was greater than the table value 3.22 for the degrees of freedom 2 and 41 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among experimental and control groups on BMI. The above table also indicates that both pre and post test means of experimental and control group differ significantly.

FIGURE – I
SHOWS THE MEAN VALUES ON BMI OF RTWHIG, RTWLIG AND CONTROL GROUP

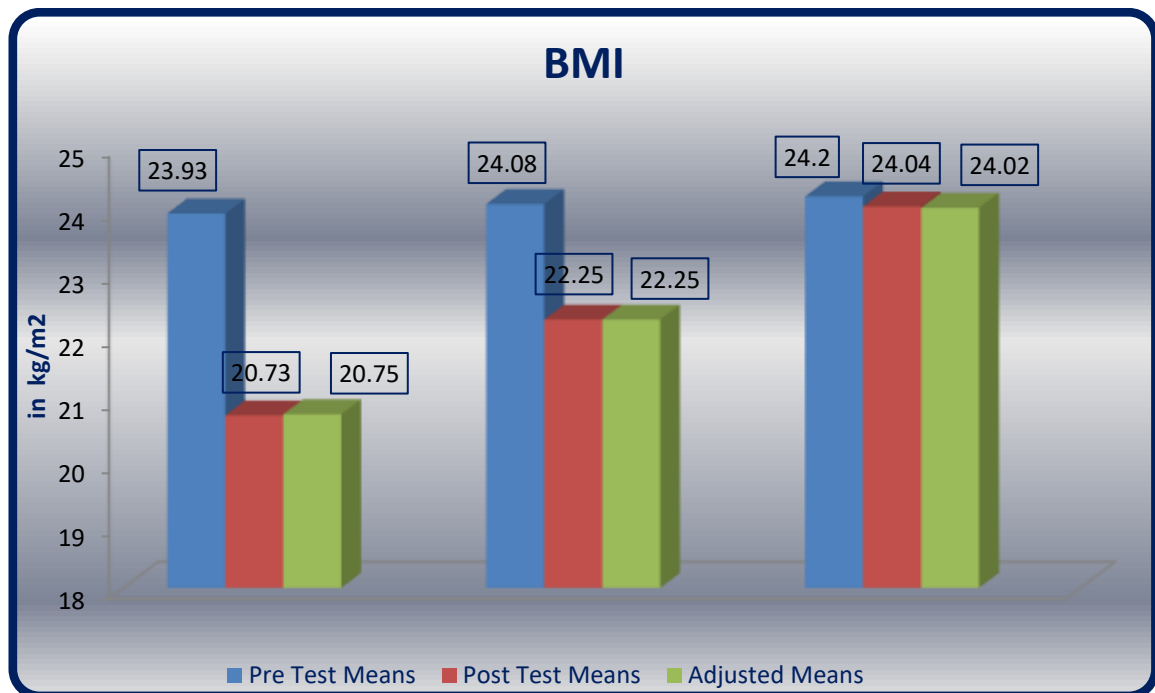


TABLE-II
ADJUSTED MEAN AND DIFFERENCES BETWEEN THE MEANS OF RTWHIG, RTWLIG AND CONTROL GROUP ON BMI

RTWHIG	RTWLIG	CONTROL GROUP	Mean Difference	CI value
20.75	22.25	---	1.50*	0.49
20.75	---	24.02	3.27*	
---	22.25	24.02	1.77*	

Table -II shows the adjusted means on BMI and difference between the means of the RTWHIG, RTWLIG and control group. The mean differences of RTWHIG and RTWLIG, RTWHIG and control group, RTWLIG and control group were 1.50, 3.27 and 1.77 respectively was greater than the CI value 0.49. Hence there exist significant differences between the groups.

CONCLUSION

1. The RTWHIG and RTWLIG had shown significant differences in BMI among college students than the control group.
2. The RTWHIG had produced significant differences in BMI among college students than the RTWLIG.

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