



INFLUENCE OF OWN BODY RESISTANCE TRAINING ON SELECTED PHYSICAL FITNESS VARIABLES AMONG SCHOOL BOYS

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ABSTRACT

This study was designed to influence of own body resistance training on selected physical fitness variables among school boys. To achieve the purpose of the study 30 school boys were selected from Government Higher Secondary School, Kalveerampalayam. Their age ranged between 15 and 17 years and they were divided into two equal groups consists of 15 each. Group I underwent the Own Body Resistance training and Group II acted as control group. The training was given to the experimental group for 3 days per week for the period of 12 weeks. The control group was not given any sort of training except their routine work. The data were collected from the subjects was statistically analyzed with dependent 't' test to find out significant improvement if any at 0.05 level of confidence. The results speculated that the muscular endurance and flexibility of school boys improved significantly due to the influence of own body resistance training with the limitations.

KEY WORDS: *Own body resistance training, Flexibility and Muscular endurance.*

INTRODUCTION

Own body weight exercises are strength training exercises that do not require any weights the practitioner's own weight provides the resistance for the movement. Movements such as the push-up, the pull-up, and the sit-up are some of the most common bodyweight exercises. Exercise training using only own bodyweight for a 10-month period in elderly individuals successfully increased maximum force by approximately 15% and power output by approximately 13%, but left unchanged maximum unloaded velocity of leg multi-joint movements. The magnitude of increase in maximum force showed a positive correlation with initial training intensity in elderly individuals. These results suggest that an introductory training program using only own bodyweight in elderly individuals can be effective for improving their lower limb muscle function however, bodyweight relative to maximum force was important in determining the effect of exercise training program with using only bodyweight for elderly individuals. The evaluation of muscle functions should be translated into the physical ability of speed, strength and power. These abilities are important for physical activities in daily life and sports. Thus, the force-velocity relations of muscles are one of the critical factors to determine the physical performance and the mechanical power of muscle movements. It is well known that velocity of shortening depends on generated muscle force. (Yamauchi, 2009)

METHODOLOGY

Purpose of the study was to find out the Own body resistance training on selected physical fitness variables among school boys. To achieve the purpose of the study 30 school boys were selected from Government Higher Secondary School, Kalveerampalayam. Their age ranged between 15 and 17 years and they were divided into two equal groups consists of 15 each. The selected physical fitness variables namely, muscular endurance was measured by push ups test and flexibility was measured by sit and reach test. Group I underwent the Own body resistance training and Group II acted as control group. The training was given to the experimental group for 3 days per week for the period of 12 weeks. The control group was not given any sort of training except their routine work. All the subjects involved in this study were carefully monitored throughout the training program, none of the reported with tear and muscle soreness. The data was statistically analyzed with dependent 't' test to find out the significant improvement between pre and post test. In all cases the criterion for statistical significance was set 0.05 level of confidence.

**RESULTS****TABLE - I**
ANALYSIS OF 'T' RATIO FOR MUSCULAR ENDURANCE AND FLEXIBILITY

Variables	Group	Test	Mean	SD	SEM	t-ratio
Muscular Endurance	Experimental Group	Pre test	11.95	0.68	0.15	16.24*
		Post test	14.43			
	Control Group	Pre test	12.05	1.80	0.40	1.86
		Post test	12.80			
Flexibility	Experimental Group	Pre test	25.10	1.08	0.24	21.92*
		Post test	30.40			
	Control Group	Pre test	24.85	2.03	0.45	1.31
		Post test	25.45			

(Significance at 0.05 level of confidence for df of 14 is 2.14)

Table I shows that the pre test mean values of experimental group and control group 11.95, 25.10 and 12.05, 24.85 respectively and the post test mean values are 14.43, 30.40 and 12.80, 25.45 respectively. The obtained dependent t-test, t value on muscular endurance and flexibility of experimental group are 16.24 and 21.92 respectively. The table value required for significant difference with degrees of freedom 14 at 0.05 level of confidence is 2.14. The obtained 't' test value of experimental group was greater than the table value. The results clearly indicated that the muscular endurance and flexibility of the experimental group improved due to the own body resistance training on school boys.

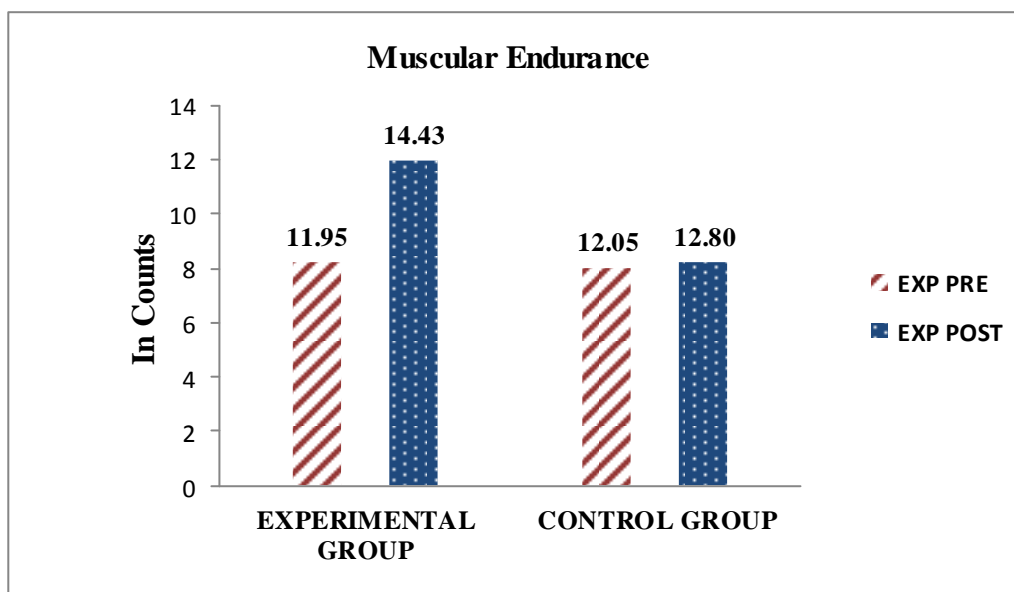
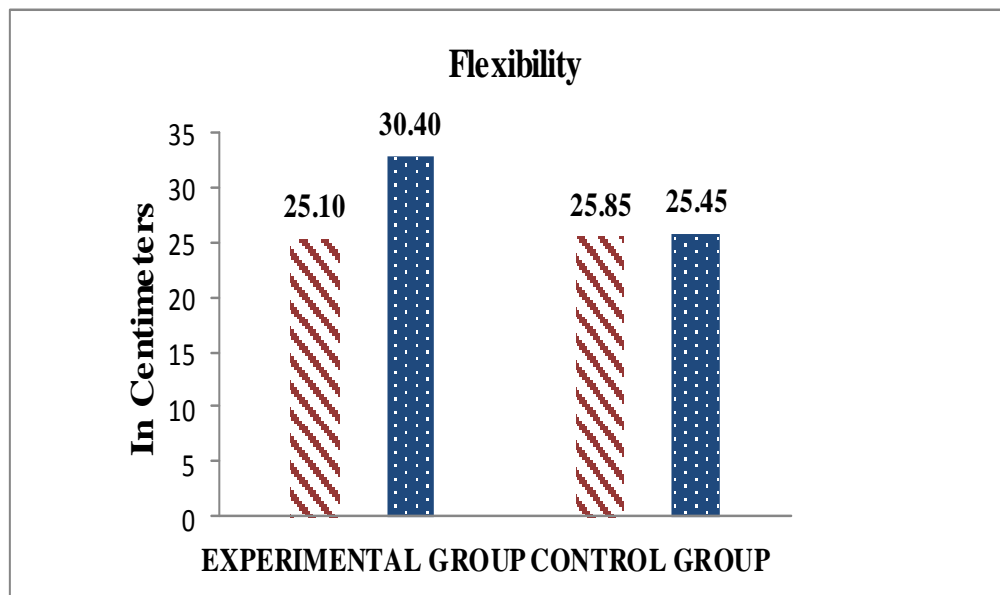
FIGURE -I
BAR DIAGRAM OF EXPERIMENTAL AND CONTROL GROUP ON MUSCULAR ENDURANCE



FIGURE-II
BAR DIAGRAM OF EXPERIMENTAL AND CONTROL GROUP ON FLEXIBILITY



DISCUSSIONS ON FINDINGS

The result of the study on selected physical fitness variables namely muscular endurance and flexibility indicates experimental group (Own body resistance training) caused significant improvement after the Own body resistance training. Based on the mean value, the experimental group was found in better increasing on muscular endurance (Arumugam et al.,(2019)) and flexibility (Devaraju et al., (2012)) when compared to the control group.

CONCLUSION

Own body resistance training have lot of exercises and movements related with muscular endurance and flexibility, the exercises can develop our flexibility and muscular endurance also. So own body resistance training helped to develop the flexibility and muscular endurance. The results of the study Own body resistance training group had significant improvement on muscular endurance and flexibility when compared to the control group.

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