

COMPARATIVE STUDY OF SELECTED EXERCISES ON STRENGTH OF RURAL AND URBAN BOYS

Dr. Sanjoy Mitra

Assistant Professor, Ramakrishna Mission Brahmananda College of Education
Rahara, Kolkata-118.

ABSTRACT

Strength is an essential component of physical fitness. The purpose of the study is to test the improvement of the Strength of rural and urban boys after 8 weeks of selected exercise treatment. The subject was randomly selected from the age group of 18–21 years. Total subjects were 80. They were divided into two groups. One is control and another one is experimental. The strength was measured by Standing Broad Jump. For statistical analysis, ‘t’ test was used and level of significance was determined at 0.05 level and 0.01 level.

Keywords: Strength, Exercise Treatment, Rural and Urban boys.

INTRODUCTION

Physical exercises are principal means of training. Without physical exercises the sports training can not lead to improvement in sports performance. Physical exercises have direct effects on performance capacity. Exercises are used to prevent injury to improve performance and psychological preparation for any kind of physical activity. Fitness can be described as a condition that helps us for better look, pleasant feel and do our best. According to Nixon (1964) – “Physical fitness refers to the organic capacity of the individual to perform the normal task of daily living without under tiredness or fatigue having reserves of strength and energy available to meet satisfactorily any emergency demands suddenly placed upon him”.

Physical fitness is to the human body what fine tuning is to an engine. It enables us to perform up to our potential. It can be described as a condition that helps us look, feel and do our best. Physical fitness involves the performance of the heart and lungs, and the muscles of the body. Play is a very old method of performing spontaneous and random muscular movement from a smaller creature to well developed animals. Such spontaneous and natural muscular actions comprise of fun, recreation and satisfaction. Play is involved with physical exercises and physical fitness components. Human beings of all ages need exercise in order to enjoy a full measure of health. Along with balanced diet, physical exercise plays a vital role in achieving a long disease-free life. Regular physical activity is proven to help preventing and manage no communicable diseases such as heart disease, stroke,

diabetes and several cancers. It also helps prevent hypertension, maintain healthy body weight and can improve mental health, quality of life and well-being.

The relative independence of strength and speed, however suggests that if some kind of weight training is given preparatory to athletic performances which require rapid movements, training should include movement which although “overloaded” could be rapid and similar in quality to those desired in the sports skill.

Studies on age-related changes in balance control have shown changes in the neuro-muscular response characteristics including decreased muscle strength, a slowing of response latencies, occasional disruption in response organization, and an increased co-activation of agonist and antagonist muscles when responding to threats to balance. In addition, older adults show more problems than young adults when balancing under conditions in which sensory inputs were reduced in walking speed and in stride length, with an increased double support phase. This was accompanied by increases in co-activation of muscles around the ankle joint.

Strength measurement, as expressed in terms of distance through which the body of an object is propelled in the space. Those tests involve both force and velocity. Other factors also influence testing results. But force and velocity are not measured as such, the measure is based on the distance (in unit) in strength measurement. The researcher had taken a standard test of Standing Broad Jump for strength to development of rural and urban boys.

METHODOLOGY

The total subjects of this study were 80 boys from Santipur College and their age group were ranging from 18–21 years of forty boys from rural areas and the same from urban areas had been randomly selected of the study.

a) Criteria Measured: The personal data age (year), height (cm.) and weight (kg) were measured by date of birth certificate, Stadiometer and weighing machine. Strength was measured by Standing Broad Jump. In this test, the total distance was measured in meter for each of them.

b) Practice Schedule: The period of treatments was 8 weeks and each group practiced three days in a week and duration was one hour per day at 3.30 pm to 4.30 pm.

Chart 1: Weekly Training Schedule

Day	Time	Duration	Procedure
Monday	3.30 pm.–3.45 p.m.	15 min.	Warm up with jogging, loosening exercises, striding, stretching, exercises, wind sprint.
	3.45 p.m.– 4.15 p.m.	30 min.	1) Run – 100 m. $\times$ 3 2) Sit up – 50 times $\times$ 3 3) Shuttle Run – 20 m $\times$ 3 4) Run with weighty jacket – 50 m $\times$ 3
	4.15 p.m.– 4.30 p.m.	15 min.	Cooling down.
Wednesday	3.30 pm.– 3.45 p.m.	15 min.	Warm up with jogging, loosening exercise, striding stretching exercises, wind sprint
	3.45 p.m.– 4.15 p.m.	30 min.	1) Walking & Running – 200 m $\times$ 3 2) Shuttle Run – 20 m. $\times$ 3 3) Jig Jag – 50 m. $\times$ 3 4) Hoff Step Jump – 10 times $\times$ 3 5) Sit up – 50 times $\times$ 2
	4.15 p.m.– 4.30 p.m.	15 min.	Cooling down.
Friday	3.30 pm.– 3.45 p.m.	15 min.	Warm up with jogging, loosening exercise, striding stretching exercises, wind sprint
	3.45 p.m.– 4.15 p.m.	30 min.	1) Shuttle Run – 20 m $\times$ 3 2) Jumping on ground – 20 times $\times$ 3 3) Run with weighty jacket – 50 m. $\times$ 3 4) Hoff Step Jump – 10 times $\times$ 3 5) Sit up – 50 times $\times$ 2
	4.15 p.m.– 4.30 p.m.	15 min.	Cooling down

DISCUSSION AND RESULT**Table 1: Comparison of Strength of Experimental Pre Test and Control Pre Test of 18–21 years rural and urban boys and**

	Variables	Expt. Pre test Mean $\pm$ SD	Control Pre test Mean $\pm$ SD	SE _D	Obtained 't' value
Rural	Boys	2.02 $\pm$ 0.17	2.01 $\pm$ 0.17	0.05	0.17 NS
Urban	Boys	1.94 $\pm$ 0.17	1.93 $\pm$ 0.17	0.05	0.18 NS

NS is Not Significant.

From Table 1, it was observed that the mean $\pm$ SD score of Strength of 18–21 years expt. Pre-test and control pre-test of rural boys were 2.02 $\pm$ 0.17 & 2.01 $\pm$ 0.17 respectively and that of urban boys were 1.94 $\pm$ 0.17 & 1.93 $\pm$ 0.17 respectively. Both the 't' values were not significant.

Table 2: Comparison of Strength of Experimental Post Test and Control Post Test of 18–21 years rural and urban boys and

\	Variables	Expt. Post test Mean $\pm$ SD	Control Post test Mean $\pm$ SD	SE _D	Obtained 't' value
Rural	Boys	2.12 $\pm$ 0.18	2.02 $\pm$ 0.18	0.05	1.74NS
Urban	Boys	2.04 $\pm$ 0.18	1.92 $\pm$ 0.17	0.05	2.13*

*Sig. at 0.05 level, NS is Not Significant.

Table 2 indicated that the mean $\pm$ SD score of Strength of 18–21 years expt. post test and control post test of rural boys were 2.12 $\pm$ 0.18 & 2.02 $\pm$ 0.18 respectively. The 't' value for rural boys was 1.74 which was not significant. The mean $\pm$ SD score of Strength of 18–21 years expt. post test and control post test urban boys were 2.04 $\pm$ 0.18 & 1.92 $\pm$ 0.17 respectively. The t-value of urban boys was 2.13 which was significant at 0.05 level.

Table3: Comparison of Strength of Experimental Pre-test and Experimental Post-test of 18–21 years rural and urban boys and

	Variables	Expt. Pre test Mean $\pm$ SD	Expt. Post test Mean $\pm$ SD	SE _D	Obtained 't' value	Improvement Occurred
Rural	Boys	2.02 $\pm$ 0.17	2.12 $\pm$ 0.18	0.05	1.75 NS	4.95%
Urban	Boys	1.94 $\pm$ 0.17	2.04 $\pm$ 0.18	0.05	1.76 NS	5.15%

**Sig. at 0.01 level, *Sig. at 0.05 level, NS is Not Significant.

It was observed from Table–3 that the mean $\pm$ SD score of Strength of 18–21

years expt. Pre-test and expt. post-test of rural boys were 2.02 ± 0.17 & 2.12 ± 0.18 respectively and that of urban boys were 1.94 ± 0.17 & 2.04 ± 0.18 respectively. The t-values of rural boys and urban boys were 1.75 and 1.76, both were not significant. Improvement occurred in rural boys and urban boys were 4.95% & 5.15% respectively.

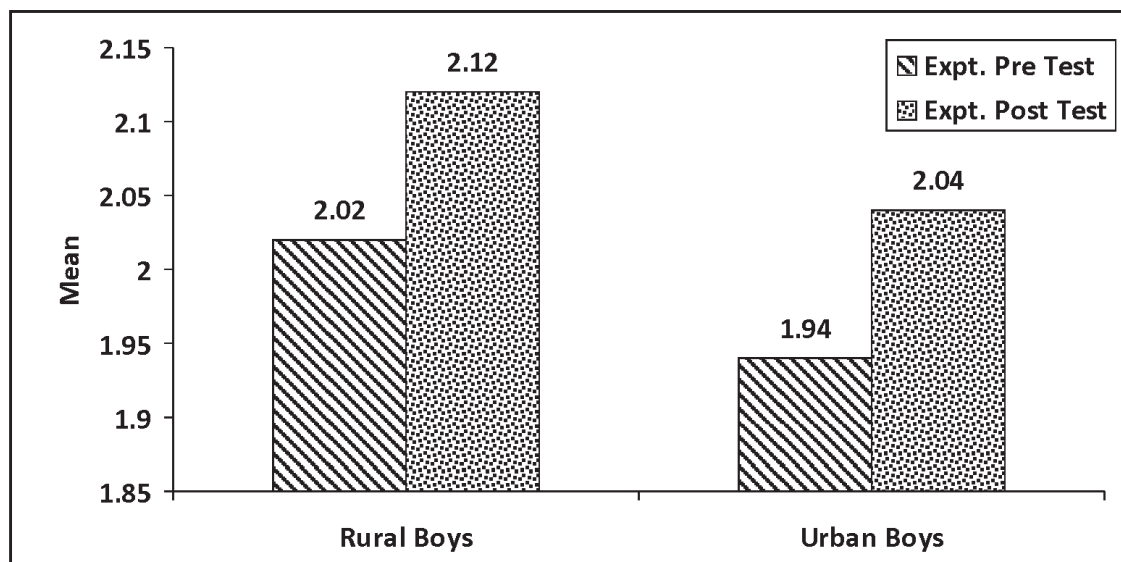


Fig. 1: Mean Score of Experimental Pre Test and Post Test of Rural and Urban Boys

Table 4: Comparison of Strength of Experimental Post Test of 18–21 years rural vs. urban boys

Variables	Expt. Post Test (Mean $\pm$ SD)		SE _D	Obtained 't' value
	Rural	Urban		
Boys	2.12 $\pm$ 0.18	2.04 $\pm$ 0.18	0.05	1.93 NS

**Sig. at 0.01 level, NS is Not Significant.

It was observed from Table 4 that the mean $\pm$ SD score of Strength of 18–21 years rural expt. Post-test rural and urban boys were 2.12 ± 0.18 & 2.04 ± 0.18 and t value was 1.93 which was not significant. It was indicated that expt. post-test mean scores of 18–21 years rural boys were higher than that of urban boys which implies better Strength of rural boys better than urban boys.

After eight weeks of exercise programme the strength has increased among 18–21 years boys at 0.01 and 0.05 level of significance.

CONCLUSION

This study concludes that the strength of 18–21 years rural and urban boys has improved significantly through the participation in exercise programme. This study also proves that the Strength of 18–21 years rural boys has improved more significantly in comparison to that of urban boys group after participating in exercise treatment.

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