

ISO 9001 - 2015

ISSN 2349 - 4891

Monthly



IF  
4.665

*Volume 4, Issue 4, April 2017*

International Journal of  
**Recent Research and Applied Studies**

**SURRAGH PUBLICATIONS**  
SURRAGH PUBLICATIONS





## Impact of Specific Training on Selected Speed, Explosive Power and Muscular Strength Parameters among Long Jumpers

Benison.T<sup>1</sup> & Mr.M.Senthil Kumar<sup>2</sup>

<sup>1</sup>M.Phil Research Scholar, Department of Physical Education & Sports Sciences, SRM University, Chennai, Tamil Nadu, India.

<sup>2</sup>Assistant Professor, SRM University, Chennai, Tamil Nadu, India.

Received 15th March 2017, Accepted 20th April 2017

### Abstract

*The purpose of the present study was to investigate the Effect of specific training on speed, explosive power and muscular strength parameters among long jumpers. To achieve the purpose of the study thirty men players were selected from Govt.Hr.Sec.School, Tambaram during the year 2016-17. The subjects' age ranges from 14 to 18 years. The selected players were divided into two equal groups consists of 15 men players each namely experimental group and control group. The experimental group underwent specific training programmed for six weeks. The control group was not take part in any training during the course of the study. Speed, explosive power and muscular strength were taken as criterion variables in this study. Pre-test was taken before the training period and post- test was measured immediately after the six week training period. Statistical technique 't' ratio was used to analyze the means of the pre-test and post test data of experimental group and control group. The results revealed that there was a significant difference found on the criterion variables. The significant difference was found due to specific training given to the experimental group on speed, explosive power and muscular strength when compared to control group.*

**Keywords:** Specific Training, Speed, Explosive power and Muscular strength.

© Copy Right, IJRRAS, 2017. All Rights Reserved.

### Introduction

The physical activity involves the movement of people, animals and/or a variety of objects such as balls and machines or equipment. In contrast, games such as card games and board games, though these could be called mind sports and some are recognized as Olympic sports, require primarily mental skills and only mental physical involvement. Non-competitive activities, for example as jogging or playing catch are usually classified as forms of recreation.

Every one participates in some kind of sports activity or physical training during the course of his life. This training may assume different forms for different individuals. This training may influence physical, physiological and mental fitness of an individual. Physical fitness is a capacity for sustained physical activity. It is the key to success in every walk of life. To understand the concept of physical fitness and adapting a balanced approach to improve your state of fitness, it is important to develop and adopt sensible training habits towards fitness training. Research has revamped the whole concept of sports. Highly technological innovations through contribution from various disciplines, like medicine, engineering, human biology,

psychology, biomechanics, exercise physiology etcetera have made the sports field more authentic, glamorous and appealing. Different methods are tried to spout out potential talents. A variety of training adoptions take place in the body that makes it to function more efficiently. Numerous training procedures are in practice to improve each and every physical and motor fitness quality at various levels. These basic training procedures will serve better when utilized with modifications suited to the individuals or a group dealt with. The best training programmed is that which increases the desired quality a higher rate without causing unwanted effects. Now day's sports activities are classified into several areas such as performance sports, physical education, rehabilitation sports, fitness and leisure sports and adventure sports. Performance sports aim at high sports performance and for that, the physical and psychic capacities of sports men are developed through various training means and methods. Most physical movements incorporate the elements of force quickness, duration, complexity and a range of motion to a certain extent.

### Methodology

For this purpose of the study thirty long jumpers were selected from Govt.Hr.Sec.School, Tambaram. The subject's age group between 14 to 18 years. All the subjects were tested on selected physical variable. The selected 30 subjects were divided in to two groups, namely experimental group and control group. Each

### Correspondence

Benison.T

E-mail: aucpescholars2015@gmail.com

group consists of 15 players and each the subjects were pre tested for their physical variable. An intentional programmer of specific training experimental group and the control group was not given any experimental treatment. After the experimental period of six weeks, post-tests scores were obtained from all the two groups. The difference between initial and final scores on specific training physical variable considered the effect of specific training on selected physical variable among school level long jumpers.

### Selection of Variables

#### Independent variables

Specific training was selected as independent variable for this study. During the period of experiment, the experimental group has given specific training. The specific training was given for three alternate days in a week and for a period of six weeks. The control group was not given any treatment during this period of experiment.

#### Dependent variables

Table 1

Difference in mean of experimental and control group in speed (50 Meter Dash Means in Seconds)

Groups	Mean		Mean Difference	S.D.	Standard Error	't' ratio
	Pre	Post				
Experimental	7.11	6.92	.19	.22	.06	3.71
Control	7.10	7.12	.02	.18	.05	1.19

\*Significant at 0.05 level of confidence. df (14) is =2.15

An examination of table 1 shows that the obtained mean values of pretest and post test were 7.10, 7.12 respectively. The standard deviations were 0.20 and 0.18 and mean difference is 0.02 the obtained 't' ratio is 1.19 the required table value is 2.15 insignificance at 0.05 level. The obtained 't' ratio is lesser than the table value. It is found to be insignificant. An examination of

### Physical variable

1.Speed	2. Explosive Power	3.Muscular Strength
---------	--------------------	---------------------

### Criterion Measures

S.No	Physical Variables	Test Item	Unit
1	Speed	50 meters dash	Seconds
2	Explosive Power	Standing broad jump	Meters
3	Muscular Strength	Sit-ups	Numbers

### Statistical Technique

The data collected from the subject on selected physical and physiological variables was statistically analyzed by using 't' ratio, 0.05 level of confidence was fixed to test the level of significance.

experimental group shows that the obtained mean values of pre test and post test were 7.11, 6.92 respectively. The standard deviations were 0.19 and 0.22 and mean difference is 0.19 the obtained 't' ratio is 3.71 the required table value is 2.15 significance at 0.05 level. The obtained 't' ratio is greater than the table value. It is found to be significant.

Table 2

Difference in mean of experimental and control group in explosive power (Standing Broad Jump Means in Meters)

Groups	Mean		Mean Difference	S.D.	Standard Error	't' ratio
	Pre	Post				
Experimental	2.15	2.20	.06	.12	.03	2.79*
Control	2.17	2.16	.01	.08	.02	0.38

\*Significant at 0.05 level of confidence. df (14) is =2.15

An examination of table 2 shows that the obtained mean values of pretest and post test were 2.17, 2.16 respectively. The standard deviations were 0.12 and 0.08 and mean difference is 0.01 the obtained 't' ratio is 0.38 the required table value is 2.15 insignificance at 0.05 level. The obtained 't' ratio is lesser than the table value. It is found to be insignificant. An examination of

experimental group shows that the obtained mean values of pretest and post test were 2.15, 2.20 respectively. The standard deviations were 0.06 and 0.12 and mean difference is 0.06 the obtained 't' ratio is 2.79 the required table value is 2.15 significance at 0.05 level. The obtained 't' ratio is greater than the table value. It is found to be significant.

Table 3

*Difference in mean of experimental and control group in muscular strength (Sit-Ups Means in Maximum count per minute)*

Groups	Mean		Mean Difference	S.D.	Standard Error	't' ratio
	Pre	Post				
Experimental	19.46	22.13	2.67	2.97	.77	2.37*
Control	20.80	20.60	.20	3.31	.85	0.14

\*Significant at 0.05 level of confidence. df (14) is =2.15

An examination of table 3 shows that the obtained mean values of pretest and post test were 20.80, 20.60 respectively. The standard deviations were 3.14 and 3.31 and mean difference is 0.20 the obtained 't' ratio is 0.14 the required table value is 2.15 insignificance at 0.05 level. The obtained 't' ratio is lesser than the table value. It is found to be insignificant. An examination of experimental group shows that the obtained mean values of pretest and post test were 19.46, 22.13 respectively. The standard deviations were 2.36 and 2.97 and mean difference is 2.67 the obtained 't' ratio is 2.37 the required table value is 2.15 significance at 0.05 level. The obtained 't' ratio is greater than the table value. It is found to be significant.

### Discussion on Findings

The investigator had a through and vision that specific training would improve long jumpers speed, explosive power and muscular endurance which in turn would help them to playing better. The investigator selected exercises that are specific training for long jumpers. To perform exercise the long jumpers should have better physical variable. It is a matter of interest how far specific training improves the long jumpers. The statistical values presented in Table I, II & III proved that there was a significant improvement in selected physical variable among long jumpers due to specific training. Obtained 't' value of speed is 3.71, explosive power is 2.79, muscular endurance is 2.37 respectively which is greater than the required 't' value to be significant. For the degrees of freedom 2.15 at 0.05 level of confidence. Thus the hypothesis of this study that there would be significant improvement due to specific training on selected physical and physiological variables among long jumpers was accepted at 0.05 level of confidence.

### Conclusions

Based on the results of the present study the following conclusions have been school boys.

1. It was concluded that there was significant improvement in selected physical variable of speed, explosive power and muscular strength due to specific training among school long jumpers.
2. The result of the study reveals that specific training would improve among on physical variable significantly.

### References

1. Al Haddad H, Laursen PB, Ahmaidi S, Buchheit M, Nocturnal heart rate Variability Following supra

maximal intermittent exercise. 2009 Dec; 4(4):435-47.

2. Albon HM, *et.al.* conducted a study on Secular trends and distributional changes in health and fitness performance variables of 10-14 year old New Zealand children between 1991 and 2003; 2008.
3. Jullien *Het.al.* Conducted a study on Does a short period of lower limb strength training improve performance in field-based tests of running and agility in young professional basketball players; 2008.
4. Johnson, AAHPER youth physical fitness test before and after a planned program of physical education; 1986.
5. Powell ke, Caspersoncj, christensongm, Physical activity exercise and physical fitness.Public Health Rep. 1985; 100:125-131.
6. Reid M, Schneiker K Strength and conditioning in tennis: current research and practice. 2008 Jun; 11(3):248-56. Epub 2007 Jun 26.