Effect of Jumping Exercise on Leg Strength of Basketball Players

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Abstract

The purpose of the present study was to find out the effect of jumping exercise on leg strength of Basketball Players. For this purpose, thirty male students studying in Lovely Professional University in the age group of 18 – 25 years were selected. They were divided into two equal groups, each group consisted of fifteen subjects, in which group-I underwent jumping exercises and group-II acted as a control group who did not participate in any special training. The training period for this study was six days in a week for six weeks. Prior to and after the training period the subjects were tested for leg strength on two aspect standing broad jump and vertical jump, t test was applied as a statistical tool. The result of the study has shown that the jumping exercise group has improved the leg strength when compared with the control group in case of standing broad jump but there was no significant difference found when compared on the basis of vertical jump.

KEYWORDS: Jumping exercise, Leg strength and basketball.

INTRODUCTION

A sport is commonly defined as an organised, competitive and skilful physical activity requiring commitment and fair play. It is governed by a set of rules. In a sport the key factors are the physical capabilities and skills of the competitor. The physical activity involves the movement of body. Physical events such as scoring goals, shooting the basket or crossing a line is the result of the players good leg strength. A lot of people think there's some secret exercise or movement that will turn them into explosive superstars overnight. In truth, there is and that exercise is called consistency and hard work! If you aren't willing to put forth consistent effort no single exercise will give you what you want. There are many quality exercises that will enable you to focus on the specific targets that your workouts must hit to help you run faster and jump higher. A lot of you may wonder if the exercises to improve one area (speed or jump) work to improve the other. Any time you increase your vertical jump and train yourself to jump higher, you'll nearly always notice you also get faster and vice versa. This is because the qualities of strength required to jump high and run fast are very similar. In fact, due to this, you can many times get faster without running, and jump higher without jumping, as long as you're enhancing the type(s) of strength required in each through your training regimen.

OBJECTIVE OF THE STUDY

The purpose of the study was to determine effect of jumping exercise on leg strength of Basketball players.

HYPOTHESIS

There will be an insignificant effect of jumping exercise on leg strength of basketball players.

PROCEDURE AND METHODOLOGY

This study under investigation involves the experimentation of jumping exercise on leg strength. Only thirty male students those who were studying in various department of Lovely Professional University and aged between 18 and 25 years were selected. The selected thirty subjects were randomly divided into two groups of fifteen each, out of which group - I (n = 15) underwent jumping exercise and group - II (n = 15) remained as control, which did not participate in any special activities. The training programme was carried out for six days per week during morning and evening session for six weeks. Leg strength was measured by conducting standing broad jump and vertical jump. The experimental factor selected is the jumping exercise and it's been innumerable. So, the scholar consulted with experts in the field of sports training, than selected the following jumping exercise:Tuck Jump, Squat, Jump to Box, High Tuck, Frog Jump, Star Jump, Hop, Single Leg Hop, Depth jump.

RESULTS AND DISCUSSIONS OF THE FINDINGS

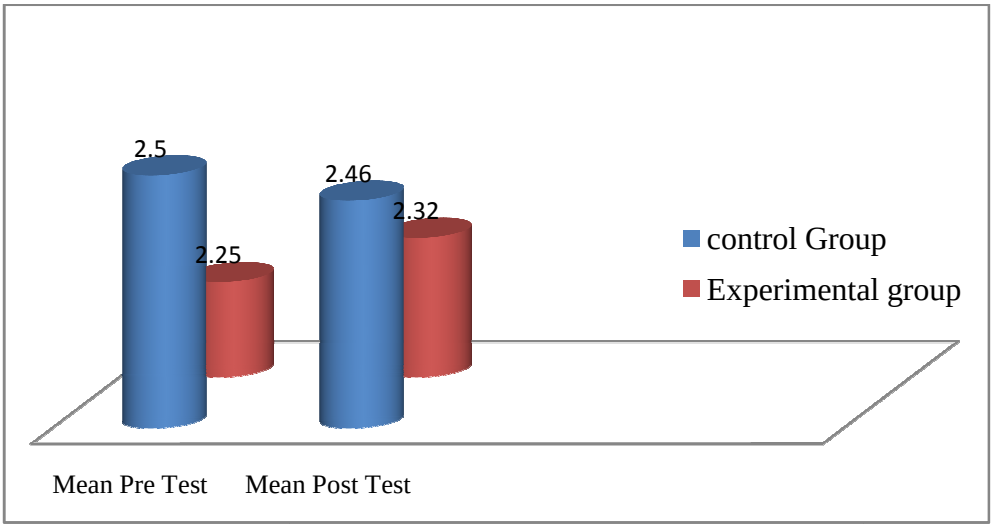
The data collected prior to and after the experimental periods on leg strength(Standing Broad Jump)on experimental group and control group were analysed and presented in the following table -I.

Table-1: Descriptive analysis of horizontal leg strength (Standing broad jump)

	Mean		S.D		d.f	t value
Group	**Pre Test**	**Post Test**	**Pre Test**	**Post Test**		
Control Group	2.50	2.46	0.232	0.17	14	0.478
Experimental Group	2.25	2.32	0.159	0.156	14	1.128

t value to be significant at 0.05 level = 1.76

Fig.-1 Mean value of standing broad jump



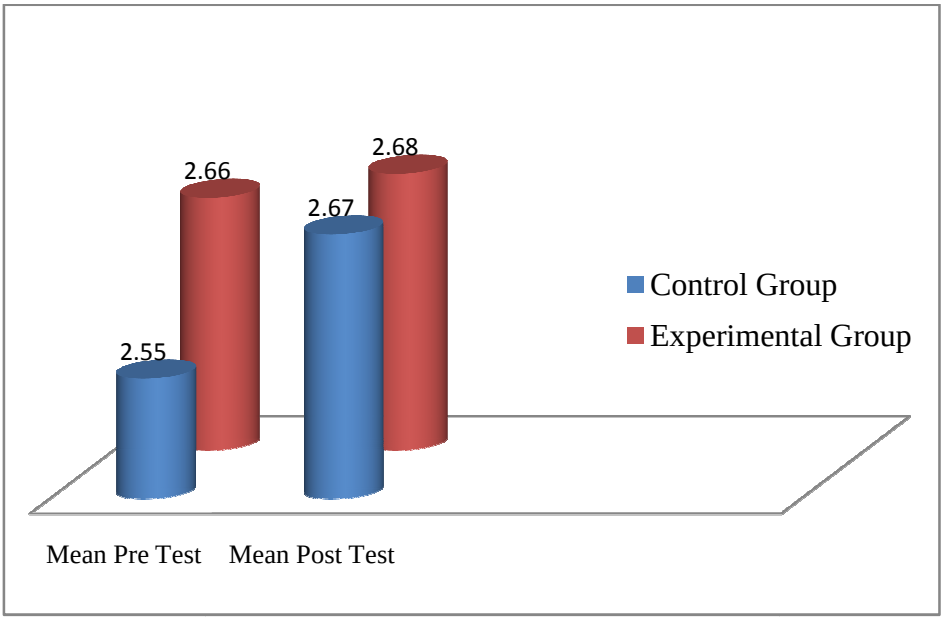
The data collected prior to and after the experimental periods on leg strength(Vertical Jump)on experimental group and control group were analysed and presented in the following table –II

Table-II-: Descriptive analysis of vertical leg strength (Vertical jump)

	Mean		S.D		d.f	t value
Group	**Pre Test**	**Post Test**	**Pre Test**	**Post Test**		
Control Group	2.55	2.67	0.40	0.38	14	0.16
Experimental Group	2.66	2.68	0.20	0.23	14	0.31

t value to be significant at 0.05 level =1.76

Fig.-2 Mean value of Vertical jump



DISCUSSION OF FINDINGS

Before applying the jumping exercise to all the subjects of the experimental and control groups pre-test was conducted a day prior to the commencement of the training and the data were collected on leg strength. After six weeks of training the post-test was conducted one day after the training period to find out any changes in the criterion variables. The t test was used to find out the significant difference if any, among the experimental group and control group having significance level 0.05. After applying the t test, the result of this study showed that there was a significant difference between experimental and control groups on standing broad jump when we compared mean but, not in the vertical jump after six weeks of training. Basically the jumping exercises have tremendously improved the leg strength. Furthermore, the duration of studywas shorter (six weeks) and players' style of play and position was not controlled by the researcher so there was no significant difference found between experimental and control group on leg strength.

CONCLUSION

Leg Strength has improved for experimental group, when compared with the control group in case of standing broad jump but there was no significant difference found when compared on the basis of vertical jump.

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