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## A study on effect of specific strength training on junior level basketball players of District Sikar Rajasthan in percentile value

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### Abstract

This study is aimed at to know the effect of specific strength training on junior level basketball players of district Sikar Rajasthan in percentile value. Through this study we try to know the various effect of specific strength training programme that affect the muscular strength of the player of basketball players who have participated at state, and national level championship. This study has been done on 30 players who are practicing at various training Centre of basketball, at district Sikar Rajasthan and participated at state and national level. Their muscular strength was measured by the scholar. The test has been done on the basketball players of age group between 14 to 17 years. The statistical analysis was done by applying the mean and sample 't' test. After statistical analysis of the collected data's from the players of basketball players of district Sikar Rajasthan.

**Keywords:** strength, training, percentile, improvement

### 1. Introduction

Basketball is one of the most popular versatile international sports which create enthusiasm and energy in every body. This game is known for its techniques, tactic, fastness, amazing accuracy and thrill and helps to develop speed, ambidexterity, strength, endurance, and coordinative ability among its players. The basketball helps to form all round motor development. Basketball is invented by Dr. James Naismith in December 1891. The purpose of each team is to through the ball in to the opponents basket and prevent the other team from securing the ball or scoring. The ball may be passed, thrown, tapped, rolled or dribbled in any direction, subject to the restriction laid down in the rules.

Basketball is a power dominating game and tall players dominating game as a player I have seen lots of time that the game required specific strength to compete with each other within 4 minutes or in extra time. So it is a curiosity of mine that what are the other specific factors of strength which required in the game of winning or to enhance the performance of an individual or team.

Strength is the ability to overcome or act against resistance. Strength should not be considered as the product of only muscle contraction. It is in fact a product of voluntary muscle contraction caused by the neuromuscular junction. Strength and strength training assumes high importance for achieving good performance in all sports. When we attempt to generalize the forms in which strength finds expression in movements the strength ability can be developed by various means but weight training is one of the best means for developing specific strength.

**Aim:** The purpose of this study is to know the effect of specific strength training programme on junior level basketball players of District Sikar region.

### Methodology

#### Selections of subjects

For the purpose of this study thirty basketball players were randomly selected from the various coaching centres. The players were selected from state and National, level basketball players. They are practicing at various basketball coaching centers in New District Sikar,

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Thirty players were selected from junior category. The ages of the players were between 14 and 17.

**Variables**

**Dependent Variable: strength Performance**

**Independent Variable: strength training programme.**

**Criterion measures/tools administration**

To measure the strength of junior level Indian basketball players, the specific strength training programme would be given to the thirty basketball players which were randomly selected from the various basketball training centre running in District Sikar. Pre-test would be conducted on the first day and then 6 weeks strength training programme would be given to all the thirty selected players and again their strength test would be conducted then evaluate the differences between pre- test and post test. Following programme was designed for the selected players

- Front Squats.
- Clean High Pull.
- Chin-Up.
- Power Lunge.
- Dumbbell Jump Squat.
- Push Jerk.
- Close-Grip Bench Press.

**Research design of study**

The design of study was a practical physiological test of research design. The anatomical test of this study has been done on basketball players of junior level at District Sikar Rajasthan in the month of November 2016. And the performance of the basketball players had been assessed by the scholar who is qualified basketball player, and working at the school as Senior Physical education teacher.

**Collection of Data:** The data had been collected on selected variables from national and state level basketball players. They are practicing various training centers of District Sikar Rajasthan.

**Statistical Analysis:** To compare the physiological and anatomical test of junior level Indian basketball players. Mean, descriptive statistics and sample ‘t’ test were used at 0.05 level of significance.

**Results:** Data were compiled using SPSS 20 version package software to calculate different variables (pre test and post test) Table 2 reveals the mean value of collected data where the mean value of pre-test is 42.1667 and the mean value of Post data is 53.2333. And at last the mean value of percentage of Improvement is 4.5333. which reveals that by applying the selected strength exercises the level of performance increase up to 4.5333. percentage. Which is quite significant.

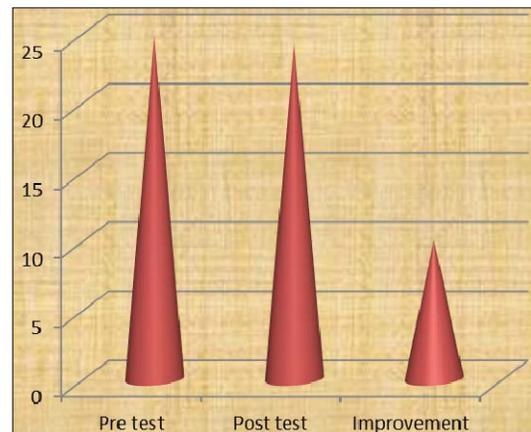
**Table 1**

S.no	Pre test	Post-test After 6 week	% of improvement
1	38	45	1
2	52	64	5
3	52	70	9
4	67	75	-01
5	44	55	3
6	46	57	7
7	39	55	9
8	43	58	6
9	61	77	5
10	47	58	2
11	35	49	7
12	41	54	4
13	32	42	2
14	31	40	2
15	35	48	3
16	47	62	6
17	42	47	2
18	36	44	5
19	36	52	5
20	33	56	5
21	46	57	7
22	39	55	9
23	43	58	6
24	61	77	5
25	41	41	4
26	32	32	2
27	31	31	2
28	35	35	3
29	47	47	6
30	33	56	5

**Table 2: One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
Pretest	30	42.1667	9.31844	1.70131
Posttest	30	53.2333	12.04212	2.19858
Improvement	30	4.5333	2.47377	.45165

**Table 3: Graphical Presentations**

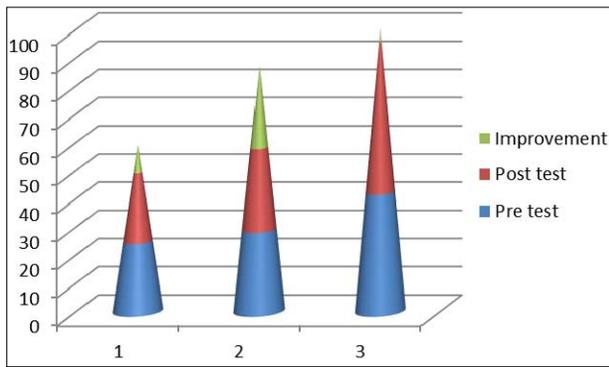


**Table 4: one sample t test**

	One-Sample Test					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pretest	24.785	29	.000	42.16667	38.6871	45.6462
Posttest	24.213	29	.000	53.23333	48.7367	57.7299
Improvement	10.037	29	.000	4.53333	3.6096	5.4571

Table 4 reveals the one sample t test which shows the t value, mean difference of calculated data where the t value of Pre-

test is 24.785 and Post value is 24.213 and the value of improvement as per the calculated data is 10.037.

**Table 5:** Graphical Presentation

### Result and Discussion

After the calculation and analysis of data the research scholar has reached to this result or conclusion that if a schedule strength training programme is given to any Basketball player a certain level of improvement can be seen in the performance level of basketball player as it can be seen in the performance of the basketball player of District Sikar, Rajasthan. Here we can see an improvement up to 4.53333. %. The result of this study is found very significant for the improvement of junior level Basketball players of Sikar district Rajasthan to improve their performance to win the competitions.

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