



**ORIGINAL RESEARCH PAPER**

**Physical Education**

**EFFECTS OF BASKETBALL SPECIFIC TRAINING WITH AND WITHOUT MEDITATION PRACTICES ON LEG EXPLOSIVE POWER OF MALE BASKETBALL PLAYERS**

**KEY WORDS:** Basketball, Specific Training, Meditation Practices, Leg Explosive Power

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**ABSTRACT**

The aim of the study was designed to determine the effects of basketball specific training with and without meditation practices on leg explosive power of male basketball players. For the purpose of the study, forty five (N=45) men Basketball players who were studying under graduate Engineering courses in various Engineering colleges at Madurai District, Madurai, Tamilnadu, India were selected as subjects. The age of the subjects ranged between 18 to 21 years. The subjects were divided at random into three groups of fifteen each (n=15). Group-I underwent Basketball Specific Training with Meditation Practices, Group-II Basketball Specific Training without Meditation Practices, and Group-III acted as Control group. The duration of the training period was restricted to twelve weeks and the number of sessions per week was confined to three. Rajyoga Meditation Module only selected for the meditation training for this study. Among the various bio-motor variables Leg explosive power only selected for this study and it was assessed by Sargent Jump Test. The data were collected prior to and immediately after the training period of twelve weeks. The data obtained from the experimental groups before and after the experimental period were statistically analyzed with Analysis of covariance (ANCOVA). Whenever the 'F' ratio for adjusted post test means was found to be significant, the Scheffe's Post hoc test was applied to determine the paired mean differences. The level of confidence was fixed at 0.05 level for all the cases. The Experimental groups namely, Basketball Specific Training with Meditation Practices group and Basketball Specific Training without Meditation Practices group had significantly improved in Leg Explosive Power. Further the results of the study were favour to the Basketball Specific Training with Meditation Practices group.

**INTRODUCTION**

Basket ball is game, basically aerobic and anaerobic in nature. Basket ball stands as the third fastest game played in short court surfaces and played with continuous flow of activity. The game basket ball needs all the physical qualities to excel in competition. Competitive basketball is considered more anaerobic than aerobic and the success in basketball appears to be dependent more on the player's anaerobic power and endurance rather than on aerobic power. Although only 15% of the playing time in a basketball game has been described as high intensity, these actions are likely to determine the outcome of a contest (Bob, 1976).

In basketball, a player not only to run up and down the court time after time for four quarters of play, but he will also need to be able to execute explosive bursts of speed, explosive jumps, and explosive movements for agility, time after time. Such an ability to perform explosively regardless of extreme cardiovascular fatigue is called "strength-endurance". Explosive power, one of the most important components of performance related factors, helps the player to move fast, jump high, and beat out the man in front of him. Having the greater intensity throughout the entire game - the player can have the ability of the faster, stronger and more enduring for the entire game (Joe, 1988).

The strength of the muscles in the limbs is moving and supporting the weight of the body repeatedly over a given period of time in terms as dynamics strength, sometimes, it has been called velocity or speed. The important aspect of this factor is the requirement that the muscular force must be repeated as many times as possible. Explosive strength and dynamic strength involve movement of the body or of its limbs.

Sports Specific Training can help to improve strength, flexibility and stamina whereby the players can improve his performance in specific sports. For this sports specific training is in need to all about developing physical conditions to improve performance and skills at a particular sport. Also, understanding the needs of the game, training/practicing at the correct pace in order to meet sports requirements. "Sport-specific" is the new marketing buzzword when it comes to strength and conditioning programs for youth. Training that is specific to the demands of a particular sport does have merit at the higher levels, assuming the athlete is developmentally sound.

**METHODOLOGY**

The study was conducted on forty five (N=45) men Basketball players who were studying under graduate Engineering courses in various Engineering colleges at Madurai District, Madurai, Tamilnadu, India were selected as subjects. The age of the subjects ranged between 18 to 21 years. The subjects were divided at random into three groups of fifteen each (n=15). Group-I underwent Basketball Specific Training with Meditation Practices, Group-II Basketball Specific Training without Meditation Practices, and Group-III acted as Control group. The duration of the training period was restricted to twelve weeks and the number of sessions per week was confined to three. Rajyoga Meditation Module only selected for the meditation training for this study. Among the various bio-motor variables Leg explosive power only selected for this study and it was assessed by Sargent Jump Test.

All the subjects were tested prior to and immediately after the training period of twelve weeks for all the selected variables. The data collected data from the three groups prior to and immediately after the training programme on the selected criterion variables were statistically analyzed with Analysis of Covariance (ANCOVA). Whenever the 'F' ratio for adjusted post test means was found to be significant, Scheffe's post hoc test was followed to determine which of the paired mean differences was significant. In all the cases .05 level of confidence was fixed to test.

**RESULTS AND DISCUSSION**

The results of the dependent 't'-test on the data obtained for Leg Explosive Power of the subjects in the pre-test and post-test of the Experimental groups and control group have been analyzed and presented in Table -I.

**Table - I**  
**Summary of Mean Standard Deviation and dependent 't' test for the pre and post tests on Leg Explosive Power of Experimental groups and Control group (Leg Explosive Power is expressed in Meters)**

Test	Descriptive Statistics	Basketball Specific Training with Meditation Practices Group	Basketball Specific Training without Meditation Practices Group	Control Group
Pre	Mean	39.66	39.60	39.86

	SD (±)	1.84	2.06	1.82
Post Test	Mean	41.84	43.19	39.86
	SD (±)	1.21	1.28	1.79
Adjusted Post Test	Mean	41.87	43.25	39.78
"t" Test		3.84	5.74*	0.01

\*Significant at 0.05 level.

The table value required for 0.05 level of significance with df 14 is 2.15.

Table-I shows that the pre-test mean and standard deviation of Leg Explosive Power on Basketball Specific Training with Meditation Practices Group, Basketball Specific Training without Meditation Practices Group, and Control group are 39.66±1.84, 39.60±2.06 and 39.86±1.82 respectively. The post-test mean and standard deviation are 41.84±1.21, 43.19±1.28 and 39.86±1.79 adjusted post-test means are 41.87, 43.25 and 39.78 respectively.

The obtained dependent t-ratio values between the pre and post test means on Leg Explosive Power on Basketball Specific Training with Meditation Practices Group, Basketball Specific Training without Meditation Practices Group, and Control group are 3.84, 5.74 and 0.01 respectively. The table value required for significant difference with df 14 at 0.05 level is 2.15. It was concluded that Basketball Specific Training with Meditation Practices Group and Basketball Specific Training without Meditation Practices Group had registered significant improvement in Leg Explosive Power.

The results of the Analysis of Covariance on Leg Explosive Power of the pre, post, and adjusted test scores of Basketball Specific Training with Meditation Practices Group, Basketball Specific Training without Meditation Practices Group and Control group are presented in Table - II.

**Table - II**  
Analysis of Covariance of the Data on Leg Explosive Power of Pre, Post and Adjusted scores of Experimental Groups and Control Group

Test	Source of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Mean	Between groups	0.56	2	0.28	0.07
	Within groups	164.36	42	3.91	
Post-Test Mean	Between groups	84.17	2	42.08	18.63*
	Within groups	94.86	42	2.26	
Adjusted Post-Test Mean	Between sets	91.48	2	45.74	42.28*
	Within Sets	44.36	41	1.08	

\* Significant at 0.05 level of confidence

Table value for df (2, 42) at 0.05 level = 3.22 Table value for df (2, 41) at 0.05 level = 3.23

Table-II shows that the obtained F-ratio value of 0.07 for pre test mean of Basketball Specific Training with Meditation Practices Group, Basketball Specific Training without Meditation Practices Group and Control group on Leg Explosive Power is less than the required table value of 3.22 for significance with df 2 and 42 at 0.05 level of confidence.

The obtained F-ratio value of 18.63 for post test mean of Intermittent training with Basketball Specific Training with Meditation Practices Group, Basketball Specific Training without Meditation Practices Group and Control group on Leg Explosive Power is more than the required table value of 3.22 for significance

with df 2 and 42 at 0.05 level of confidence.

The obtained F-ratio value of 42.28 for adjusted post test mean of Basketball Specific Training with Meditation Practices Group, Basketball Specific Training without Meditation Practices Group and Control group on Leg Explosive Power is higher than the required table value of 3.23 for significance with df 2 and 41 at 0.05 level of confidence.

The results of the study indicate that there is a significant difference between the adjusted post-test means of Basketball Specific Training with Meditation Practices Group, Basketball Specific Training without Meditation Practices Group and Control group on Leg Explosive Power.

Since three groups are compared and whenever the obtained 'F' ratio for adjusted post test is found to be significant, Scheffe's test is used to find out the paired mean difference and it is presented in Table-III.

**Table - III**  
Scheffe's Test for the Difference between Paired Means on Leg Explosive Power

Basketball Specific Training with Meditation Practices Group	Basketball Specific Training without Meditation Practices Group	Control Group	Mean Difference	Confidence Interval Value
41.87	43.25	---	1.38*	0.97
41.87	---	39.78	2.09*	
---	43.25	39.78	3.47*	

\*Significant at 0.05 level of confidence.

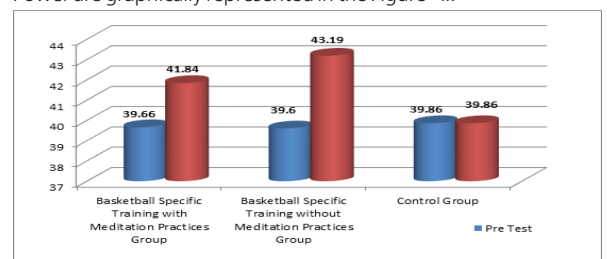
Table-III shows that the mean difference values of Basketball Specific Training with Meditation Practices Group and Basketball Specific Training without Meditation Practices Group, Basketball Specific Training with Meditation Practices Group and Control group, Basketball Specific Training without Meditation Practices Group and Control group are 1.38, 2.09 and 3.47 respectively, which are greater than the confidence interval value of 0.97 on Leg Explosive Power at 0.05 level of confidence.

The results of the study showed that there was a significant difference between Basketball Specific Training with Meditation Practices Group and Basketball Specific Training without Meditation Practices Group, Basketball Specific Training with Meditation Practices Group and Control group, Basketball Specific Training without Meditation Practices Group and Control group.

The above data also reveal that Basketball Specific Training with Meditation Practices Group had shown better performance in Leg Explosive Power.

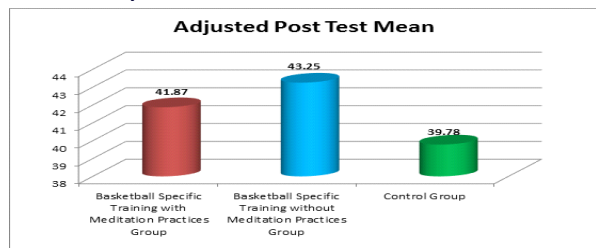
The pre and post mean values of Basketball Specific Training with Meditation Practices Group, Basketball Specific Training without Meditation Practices Group and Control group on Leg Explosive Power are graphically represented in the Figure -I.

The adjusted post mean values of Basketball Specific Training with Meditation Practices Group, Basketball Specific Training without Meditation Practices Group and Control group on Leg Explosive Power are graphically represented in the Figure -II.



**Figure: (I) The Pre and Post test Mean values of Basketball Specific Training with Meditation Practices Group,**

**Basketball Specific Training without Meditation Practices Group and Control group on Leg Explosive Power (In Centimeters)**



**Figure: II The Adjusted Post Mean Values of Basketball Specific Training with Meditation Practices Group, Basketball Specific Training without Meditation Practices Group and Control group on Leg Explosive Power (In Centimeters)**

**CONCLUSION**

From the analysis of the data, the following conclusions were drawn.

1. The Experimental groups namely, Basketball Specific Training with Meditation Practices Group and Basketball Specific Training without Meditation Practices Group had significantly improved in Leg Explosive Power.
2. Significant differences in achievement were found among Basketball Specific Training with Meditation Practices Group and Basketball Specific Training without Meditation Practices Group in Leg Explosive Power.

The Basketball Specific Training with Meditation Practices Group was found to be better than the Basketball Specific Training without Meditation Practices Group and Control Group in developing Leg Explosive Power.

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