

**EFFECT OF CIRCUIT TRAINING AND PLYOMETRIC TRAINING ON  
DEVELOPMENT OF EXPLOSIVE POWER AMONG UNIVERSITY FEMALE  
TAEKWONDO PLAYERS IN TELANGANA REGION**

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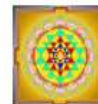
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**Abstract:**

The aim of this study was to find out The Development of Explosive Power among University Female Taekwondo Players in Telangana Region. To achieve the purpose of the study Thirty female Taekwondo players have been randomly selected from Osmania University. The age of subjects was ranged from 19 to 23 years. The researcher has chosen the experimental method to carry-out the research work for collecting the data and to arrive at conclusion. The test conducted for Explosive Power: (i) Standing Broad Jump. The subjects were tested on selected variables prior. The data were selected to the t-ratio test of analysis for significance. The collected data were analyzed statistically through analysis of Mean, Standard deviation and t-ratio test to find out the significance difference, if any between the Taekwondo players. The 0.05 level of confidence was fixed to test the level of significance difference.

**INTRODUCTION**

A combat sport or fighting sport is a competitive contact sport where two combatants fight against each other to gain enough points or a condition to declare a single winner by means of using certain rules of direct engagement. These engagements rules and conditions are significantly different from the rules in simulated contact or combat meant for technical based challenges, practice, or demonstration in martial arts, typically with the aim of simulating parts



of real hand to hand combat through kata and self-defense training. Boxing, kickboxing, amateur wrestling, judo, mixed martial arts, Muay Thai and Swordsmanship are examples of combat sports.

## **TAEKWONDO**

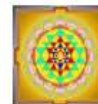
Taekwondo is one of the most regular and scientific Korean traditional martial arts, that teaches more than physical combat skills. It is a discipline that shows ways of enhancing our soul and life through teaching our body and concentration. Today, it has become a universal sport that has gained a worldwide reputation and stands among the authorized games in the Olympics. Taekwondo hunts melodious growth and improvements of life through its exclusive activities. This are why one might say taekwondo is a way of life. To finally enable ourselves to lead more valuable lives, we would do well by finding the guiding principles deeply hidden in taekwondo (Tedeschi, 2013).

## **STATEMENT OF THE PROBLEM**

The Purpose of the present study to find out the “Effect of Circuit Training and Plyometric Training on Development of Explosive Power among University Female Taekwondo Players in Telangana Region.”

## **SIGNIFICANCE OF THE STUDY:**

The findings of the study may be helpful for the physical education teachers and coaches, in assessment of the players ability to take part in different activities and to identify the suitable packages of physical training for the Taekwondo players to improve their performance.



## **HYPOTHESIS**

It was hypothesized that there would be a significant improvement on Explosive power due to the Effect of Circuit Training and Plyometric Training among university female taekwondo players.

## **DELIMITATIONS**

The study was delimited to 30 female (10 from each group) from Osmania University, Telangana, India.

## **LIMITATIONS**

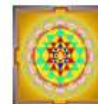
The following factors like food habits, life style, daily routine works, the changes in the climatic conditions like temperature, atmospheric pressure, humidity, were not taken into consideration.

## **METHODOLOGY**

The purpose of the study was to find the “Effect of Circuit Training and Plyometric Training on Development of Explosive Power among University Female Taekwondo Players in Telangana Region.” To achieve the purpose of this study 30 female players from Osmania University, Telangana, India. Were randomly selected as subjects and their age ranged between 19 to 23 years.

## **EXPERIMENTAL DESIGN**

For this study, the subjects are selected at random, independently drawn from Osmania University, Telangana, India. who actively participated in the District, State, South-Zone and National tournament in their respective Game. Hence, the design of the subjects chosen for this study was based on independently random group design.



1. Experimental Group -I acted as Circuit Training group (n=10).
2. Experimental Group -II acted as Plyometric Training group (n=10).
3. Control group (n=10) did not participate any specific training programme.

**CRITERION VARIABLES AND TEST:**

S.NO	Dependent Variables	Testes/ Instruments	Unit of Measurement
1.	Explosive Power	Standing Broad Jump	metres

**ANALAYSIS OF DATA**

The test conducted by selecting Thirty Taekwondo players from Osmania University, Telangana, India. The data was collected by conducting Standing Broad Jump test. The collected data were subjected to the t-ratio test of analysis for significance.

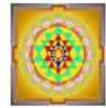
**RESULTS AND DISCUSSION**

**TABLE-1**

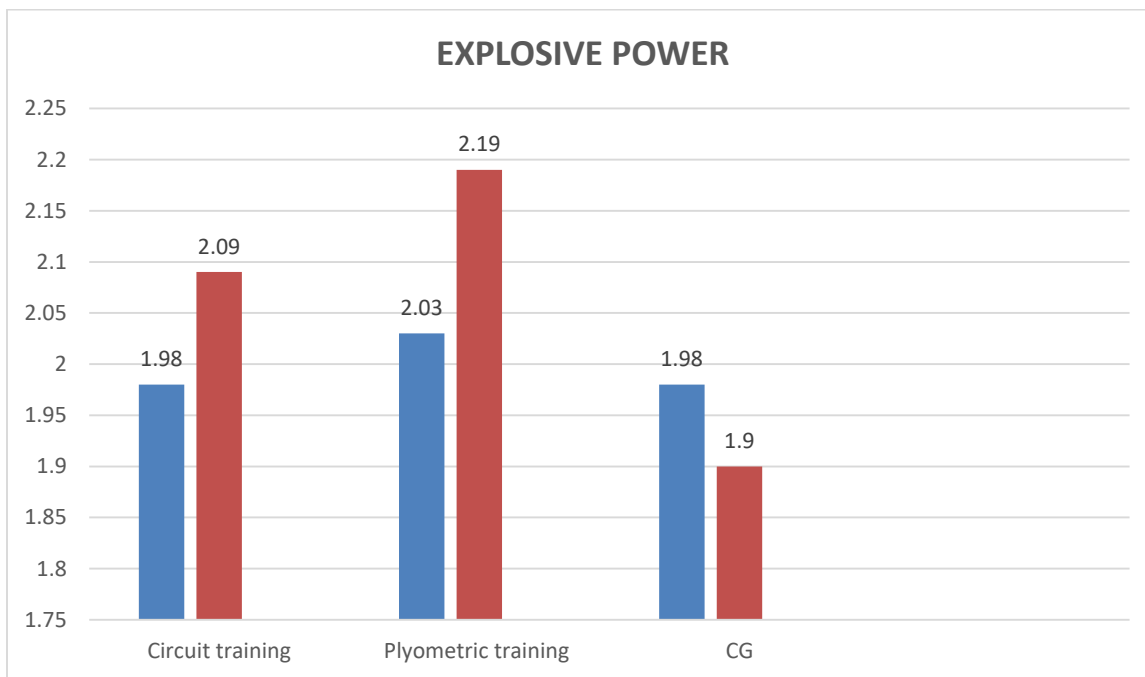
**CIRCUIT TRAINING AND PLYOMETRIC TRAINING - COMPUTATION OF 'T' VALUE**

Group	Variables	Mean		SD		Obtained 't' values
		Pre	Post	Pre	Post	
<b>Circuit training</b>	Explosive power	1.98	2.09	0.234	0.0830	0.410
<b>Plyometric training</b>	Explosive power	2.03	2.19	0.195	0.0830	2.66
<b>CG</b>	Explosive power	1.98	1.9	0.11	0.14	1.8

**Significant.**

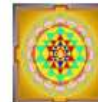


From the above table it was observed that the calculated ‘t’ values of Explosive power, Circuit training were 0.410 respectively and Plyometric training were 2.66 respectively and CG were 1.8 respectively. Since the obtained ‘t’ values of Plyometric training are more than the required ‘t’ values, therefore it was found that there is a significant difference between the mean values of pre and post training for the Plyometric training. Since the obtained ‘t’ values of Circuit training is less than the required ‘t’ values, therefore it was found that there is No significant difference between the mean values of pre and post training for the Circuit training. It was found that there is no significant difference between the mean values of pre and post training for the Control Group as the calculated value is less than the required ‘t’ value. Hence the effect of Plyometric Training is visible on Explosive power.



## DISCUSSION OF FINDINGS

The study found that circuit training and plyometric training significantly altered selected physical fitness variables explosive power of taekwondo players.



## CONCLUSIONS

It was concluded that circuit training and plyometric training significantly improved physical fitness variable, explosive power of taekwondo players compared to control group. The comparison between the treatment groups proved that plyometric training was significantly better than circuit training in improving explosive power of the subjects.

## REFERENCE

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