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Research Article

# Impact of Two Different Training Packages on Explosive Power Among Volley Ball Women Players

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## Abstract

*To determine the potential role to investigate the impact of two different training packages on explosive power among volley ball women players. Subjects for this study were selected from the Tagore Arts and science college, Chennai, Tamil Nadu, India. The investigator met the players and explained to them about the purpose and nature of the study. Around fifty players gave their voluntary consent to work as subjects for the study out of those volunteers ten of them who were above 17 years of age and beyond the age of 22 years were excluded from the study, because the subjects for investigation are to be of 17-22 years. Among fifty, forty-five were selected as subjects and were divided random by using the table of random as suggested by Clarke and Clarke (1972), they were divided randomly in to three groups as Group-I acted as control, Group-II strength training, Group-III ladder and medicine ball training groups. In this research volleyball selected explosive power and volleyball setting are variables only. It was assessed by vertical jump test and volleyball skill test. The subjects were involved with their respective training for a period of eight weeks. At the end of the eight weeks of the training post-tests were taken. The significant differences between the means of experimental group and control group for the pre-test and post-test scores were determined by paired 'F' ratio and ANCOVA. The level of significance was fixed at 0.05 level of confidence for the degree of freedom. The strength training and ladder and medicine ball training group produced significant improvement in physical fitness variable of explosive power of volleyball setting variables. The 'F' values of the selected variable have reached the significant level, in the control group the obtained 'F' value on explosive power was succeeded to reach the significant level.*

**Keywords:** *Volleyball, Explosive power, Women athletes, Strength training, Ladder training.*

## Introduction

Volley ball developing the skills is crucial for team success, and various factors can influence the learning process, including the learner's one's individual and group attitude, the quality of standard instruction, and even external moral good support.

## Statement of the problem

The purpose of the study is to find out the effect of two different training on physical fitness explosive power among volley ball women players.

## Delimitations

The following delimitations were set for the present study.

1. For this study healthy forty five subjects were selected for this study.
2. The subjects were selected from Tagore arts and Science College, Chennai, Tamilnadu.
3. The subjects age ranges between 17-22 years

4. The selected subjects were divided in to three equal groups of fifteen each. Subjects acted as namely group - I control group (CG), group-II Strength training group (STG), and group-III Ladder and Medicine ball training (LAMTG).
5. The selected upper body, lower body and core exercises were given to respected oriented group.
6. The duration of the training period was stipulated to 8 weeks for 3 days per week (45 minutes).
7. Physical fitness variable- explosive power.
8. The study was confined to the independent and dependent variables.

## Limitations

The following measures were set for this present study.

1. The hereditary and environmental factors which would influence the criterion variables were recognized as limitation.
2. Methodological variations air, temperature, atmospheric pressures relative humidity etc., during testing periods could not be controlled and the possibility influence on the result.
3. Day to day activity, food habits, and resting period life style could not be controlled.

## Objectives of the study

The objectives were set for this study.

1. To analyse the selected skill acquisition and physical fitness of volleyball variables through control Group (CG), Strength Training (STG), Ladder and medicine Ball Training (LAMT).
2. To analyse the experimental group, maintain in selected variables applied, for longer period of duration of training time.
3. To analyse the changes are in selected skill acquisition selected variables among volley ball women players in college students due to the effect of significant different training programmes.

## Hypotheses of the study

The following research hypotheses were formulated and it was tested at 0.05 level of confidence.

1. It would be hypothesized that the effect of two different packages of trainings on explosive power variable among volleyball Women College players will be significantly increase when compared the control group.
2. There would be significant improvement on explosive power variable in to the when comparable more effect of ladder and medicine ball training groups than strength training.

## Definitions of the terms

### Strength training

Muscles work against weight /force by these developing muscles strength is known as strength training- physiopedia.

## Ladder training

Influence the number of reps which perform decreasing or increasing in every set-tonal.com.

## Medicine ball training

A large heavy solid ball thrown and caught for exercises.

## Methodology

The investigator met the players and explained to them about the purpose and nature of the study. Around fifty players gave their voluntary consent to work as subjects for the study out of those volunteers ten of them who were above 17 years of age and beyond the age of 22 years were excluded from the study, because the subjects for investigation are to be of 17-22 years. Among fifty, forty-five were selected as subjects and were divided in to three groups as Group-I acted as control, Group-II strength training, Group-III ladder and medicine ball training groups. In this research volleyball selected explosive power and volleyball setting are variables only. It was assessed by vertical jump test and volleyball skill test. The subjects were involved with their respective training for a period of eight weeks. At the end of the eight weeks of the training post-tests were taken. The significant differences between the means of experimental group and control group for the pre-test and post-test scores were determined by paired 'F' ratio and ANCOVA. The level of significance was fixed at 0.05 level of confidence for the degree of freedom.

## EXPLOSIVE POWER

**Purpose**

To measure the explosive power by using the vertical jump.

## Equipments and Materials

Height Measuring marked scale, chalk.

## Procedure

With the feet parallel to each at same point Height measuring scale (if not, measurement should be written on wall by measured using by Measuring Tape) Jump and touch the measured scale as can as possible. Best of three trials will be given.

## Scoring

Among in Best of three jumps the highest measurement will be scored as best jumps.

## Analysis of Covariance on Volleyball Explosive Power Between Pre and Post-Test CG PTG and SSTG Groups

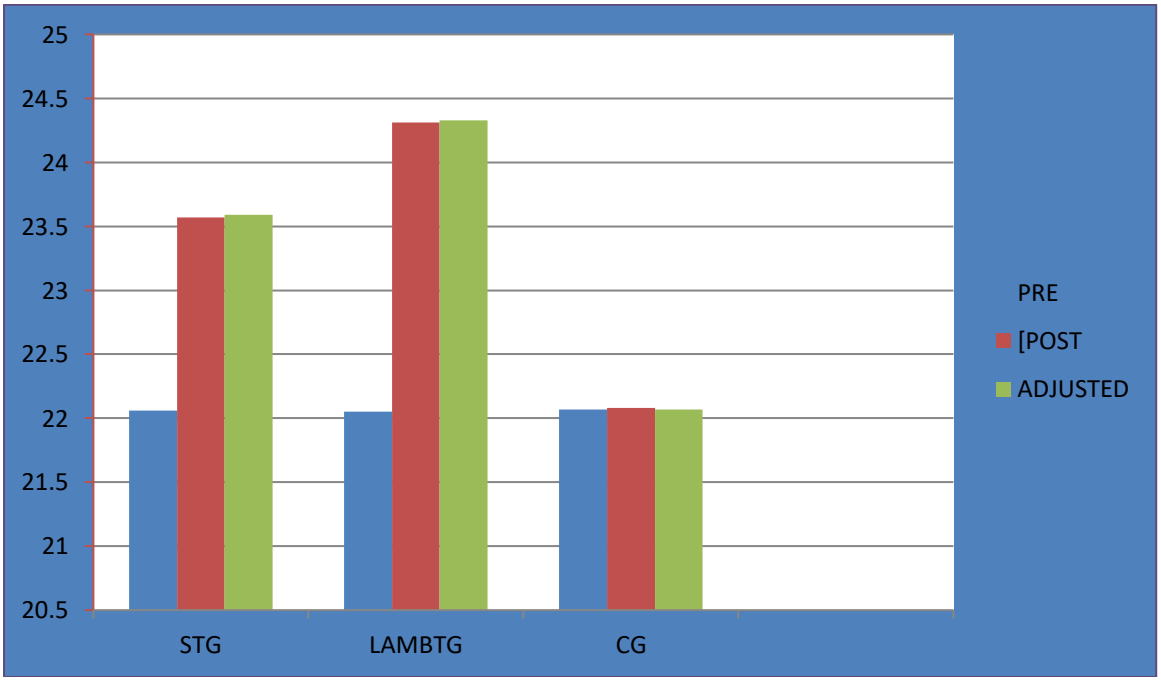
| Test | STG | LAMBTG | CG | SOV | Sos | df | MS | Obtained 'F' ratio |
|---|---|---|---|---|---|---|---|---|
| **Pre test Mean** | 22.06 | 22.05 | 22.07 | B | 0.02 | 2 | 0.01 | 0.54 |
| **SD** | 0.54 | 0.37 | 0.53 | W | 0.10 | 42 | 0.02 | |
| **Post test Mean** | 23.57 | 24.33 | 22.08 | B | 39.22 | 2 | 19.61 | 18.83* |
| **SD** | 1.40 | 1.06 | 0.23 | W | 42.70 | 42 | 1.04 | |
| **Adjusted post-test mean** | 23.59 | 24.31 | 22.07 | B | 39.49 | 2 | 19.74 | 19.34* |
| | | | | W | 42.87 | 41 | 1.02 | |

## Schefee's Post HOC Test for the Difference Between Three Paired Adjusted Posttest Means of Explosive Power

| Adjusted Post Mean Test | | | Mean Difference | Confidence Interval |
|---|---|---|---|---|
| STG | LAMTG | CG | - | |
| 23.59 | 24.31 | - | 0.72 | 1.07 |
| 23.59 | - | 22.07 | 1.52 | 1.07 |
| - | 24.31 | 22.07 | 2.24 | 1.07 |

## Pre-Post and Adjusted Posttests Means Values on Explosive Power for All the Groups

**Figure**



## Conclusion

There was a significant result in explosive power due to the strength training and ladder and medicine ball training group produced significant improvement in physical fitness variable of explosive power. As such as second hypothetical showed when comparably with two experiment training medicine ball and ladder training showed good improvement.

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