IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

# "EFFECTIVENESS OF MEDICINE BALL TRAINING PROGRAMME IN FEMALE THROWBALL PLAYERS"

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**Abstract**

**INTRODUCTION**: Sports achivements of a country depends mostly on the training design for a particular sports.sucsess in the competitive sports and games can be attributed to many factors, but training is a most important factor. Different training methods have been commonly used to improve physical fitness and related standards of performance of athlets. **OBJECTIVE**: The purpose of the study is to find out the effectiveness of medicine ball training. **METHODOLOGY**: The total number of students in this study were 14 female throw ball players between 18-25 years . The overhead medicine ball test is used to assess the throwing velocity and the alternate hand wall toss test is used to assess the hand eye co-ordination . **RESULT**: After the analysis, The results of the study shows there is significante improvement in throwing velocity. MBTT – pretest value is 169 cm and posttest value 202 cm AHWTT – pretest value is 22/min and posttest value is 31/min.**CONCLUSION**: : It concluded that medicine ball training elicit significant improvements in functional performance , also helps increasing shoulder muscle strength . Hence it is recommended medicine ball training is good for female throwball players to enhance the performance

**KEY WORDS**: medicine ball,throwball players,throwing velocity

## INTRODUCTION

Sports achivements of a country depends mostly on the training design for a particular sports.sucsess in the competitive sports and games can be attributed to many factors, but training is a most important factor. Different training methods have been commonly used to improve physical fitness and related standards of performance of athlets.

Throwing is a basic and complex motor skill. It is said to be, "one of the most difficult fundamental motor skill for children and adults and its acquisition requires coordination of the whole body" This motor skill is an important part of the integrative (non-specific) concept of team-ball games according to the game implicit learning model . Under this concept, sport games are grouped according to rebound games, goal-scoring games and throwing games (invasion games). Among throwing games, the technically correct throwing movement is relevant for, and comparable to many sport disciplines such as throwball; yet it is also fundamental for learning the process of the javelin throw. "The success of an individual athlete or a team is highly dependent on how well the essential techniques of the sport are applied and mastered." Typical throwball specific situations in which the overarm throwing movement comes into effect are 7-m throws, free-throws, backcourt throws, and the initiation of fast breaks . The overarm throwing movement is also a form related to the jump shot, which is the most important and most commonly used throwing technique in throwball . Hence, this motor skill is an important part of school and university education, as well as belonging to club sport.

Throwing is one of the most important skills in throw ball team.Throwing is a complex motion and can be considered as a fast discrete movement of high intensity, which can be subdivided into 6 phases: windup, stride, arm cocking, arm acceleration,arm deceleration, and follow through .

Throwball coaches and scientists who have investigated overarm throwing are in agreement that the main determinants of the ball velocity can be divided into three groups

- Concerning technique of motion
- Somatic features
- Motor ability (physical fitness),

Two basic factors are of importance with regard to the efficiency of shots:

- Accuracy
- Throwing velocity

Throwball is popular in Asia, especially on the Indian subcontinent, and was first played in India as a women's sport in Chennai during the 1940s. Like volleyball, the game's roots are linked with the YMCA. Both volleyball and newcomb ball, while older games, share many similarities with throwball. Throwball rules were first drafted in 1955 and India's first national level championship was played in 1980.

Several studies have been conducted regarding the efficiency of different strength training programs aimed to improve power values (i.e., peak power) and throwing velocity in throwball players. Moreover, specific throw exercise programs including throwing with slightly underweight and overweight balls as regulation balls have also demonstrated beneficial carryover effects on throwing velocity in throwball players. However, medicine ball exercises, which are capable to closely mimic the sport-specific actions and movement patterns (i.e., sequential ballistic rotational movements) and are highly recommended in power sports , have to date only been shown positive transfer effects on muscle strength and power in female throwball players.

**AIM :**

- The aim of the study is to find out the effectiveness of medicine ball training in female throw ball players

**OBJECTIVES :**

- To evaluate the throwing velocity by using over head medicine ball throw test
- To evaluate the hand eye coordination by using alternate hand wall toss test

**NEED FOR THE STUDY;**

- Many studies have been done to find the effect of MEDICINE BALL TRAINING in rehabilitating athletes return to sports.
- But very few studies have done on upper limb. Specifically the effectiveness on throwing.

## MATERIALS AND METHODOLOGY

### MATERIALS REQUIRED:

- Medicine ball
- Throw ball
- Tennis ball
- Inch tape
- Stopwatch
- Pen
- papper

### SOURCE OF DATA:

Subjects will be collected from Roever College of physiotherapy in Perambalur.

**STUDY DESIGN:**
Pre test and post test experimental study design

**SAMPLE TECHNIQUE:**
Convinient sampling

**DURATION OF STUDY:**
1 month

**STATISTICAL TOOL:**

- Overhead medicine ball throw test
- Alternate hand wall-toss test

**SAMPLE SIZE:**
Sample size is 14 members

**INCLUSION CRITERIA:**

- Female
- College throwball players
- Age (18 years to 25 years)

**EXCLUSION CRITERIA:**

- Recent history of upper limb spine fracture.
- Previous history of shoulder dislocation, sublaxation.
- Joint stiffness.
- Tennis elbow.
- Previous history of rotator cuff tear.
- Biceps tendinitis.
- Previous history of nerve injury.
- Previous history of injury to middle index and thumb.
- Neck pain.
- Present history of injuries around shoulder and scapula.

**OUTCOME MEASURE:**

- **OVERHEAD MEDICINE BALL THROW TEST:**

The players stands at a line with the feet side by side and slightly apart ,and facing the direction to which the ball is to be thrown.The ball is held with the hands on the sides and slightly behind the centre.The ball is brought back behind the head then throw vigorously forward as far as possible . The subject is permitted to step forward over the line after the ball is released,and is in fact encouraged to do so in maximizing the distance of the throw.

- **ALTERNATE HAND WALL-TOSS TEST:**

A mark is placed a certain distance from the wall (e.g. 2 meters, 3 feet). The person stands behind the line and facing the wall. The ball is thrown from one hand in an underarm action against the wall, and attempted to be caught with the opposite hand. The ball is then thrown back against the wall and caught with the initial hand. The test can continue for a nominated number of attempts or for a set time period (e.g. 30 seconds).

**PROCEDURE:**

A experimental study (i.e., pretest,posttest) design was used to investigate the outcome effects of 4 weeks of MBT on throwing velocity. A total of 14 competitive female throwball players were participated in the study. The training intervention consisted of an MBT program, performed 3 times a week for a total of 4 weeks, focusing on throwball-specific movement patterns, each session comprised of 5–10 minutes of warm-up, approximately 45 minutes of medicine ball training, and 5–10 minutes of cool-down. The warm-up and cooldown involved light jogging and both static and dynamic stretching to prepare the body for training.

**STRUCTURED MEDICINE BALL TRAINING PROGRAMME**

| **Weeks** | **1 week** | **2 week** | **3 week** | **4 week** |
|---|---|---|---|---|
| **sets× reps×load(kg)** | 3 x 6 x 2 | 3 x 8 x 2 | 3 x 10 x 2 | 2 x 12 x 1 |
| **Rest(s)** | 60 between set | 75 between set | 90 between set | 120 between set |
| **Medicine ball throws** | Two-arm overhead throw | Two-arm overhead throw | Two-arm overhead throw | Two-arm overhead throw |
| | overhead backward Throw | overhead backward Throw | overheadbackward Throw | overhead backward Throw |
| | Two-arm diagonal overhead Throw | Two-arm diagonal overhead Throw | Two-arm diagonal overhead Throw | Two-arm diagonal overhead Throw |
| | Two-arm rotational side throw | Two-arm rotational side throw | Two-arm rotational side throw | Two-arm rotational side throw |
| | Single-arm shot put throw | Single-arm shot put throw | Single-arm shot put throw | Single-arm shot put throw |

## DATA ANALYSIS

**Table :1** Overhead medicine ball throw test

| TEST | NUMBER | MEAN VALUE |
|---|---|---|
| pretest | 14 | 169 |
| posttest | 14 | 202 |

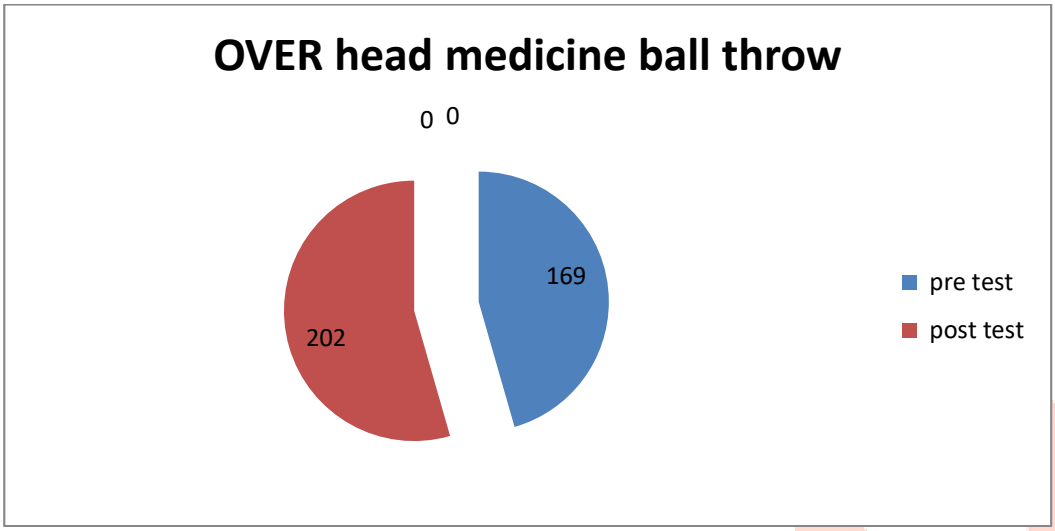
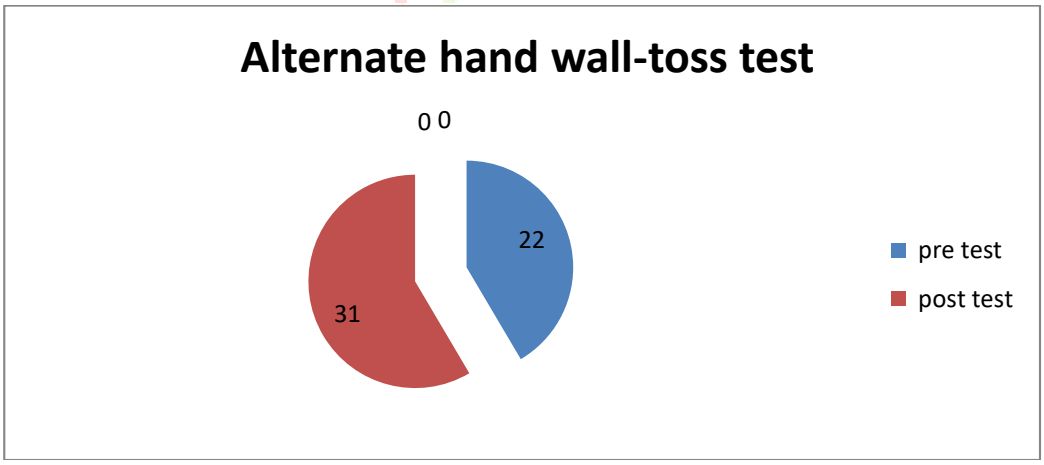



**Table :2** Alternate hand wall-toss test

| TEST | NUMBER | MEAN VALUE |
|---|---|---|
| pretest | 14 | 22 |
| posttest | 14 | 31 |



## RESULT

- Mean value was done. Results of pre and post test of medicine ball training has significant effect on female throw ball players.

- **MBTT** – pretest value is 169 cm and posttest value 202 cm
- **AHWTT** – pretest value is 22/min and posttest value is 31/min.

## DISCUSSION

Muscle strength is vital to perform physical activities of daily living, requirement of strength Is more in cases of activities , so as to bring about a competitive performance.The athletes involved in throwing have an harmful effects of repetitive deceleration the arm and the key to longevity is to maintain muscular balance within the shoulder complex.In this study, medicine ball training has showed a significant improvement on throwing velocity in throw ball players.

The aims of this study were to determine the effects of an MBT program on shoulder rotational strength and throwing velocity in amateur female throwball players and to evaluate its influence on throwing precision. Results showed that 4 weeks of periodized MBT can elicit significant improvements in the performance variables analyzed (throwing velocity) in amateur female throwball players.

## CONCLUSION

In conclusion, the present results showed that 4 weeks of medicine ball training elicit significant improvements in functional performance , also helps increasing shoulder muscle strength.

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