

# EFFECT OF NON-THRUST OSCILLATORY TECHNIQUE VS NON-THRUST SUSTAINED JOINT- PLAY TECHNIQUE FOR PATIENT SUFFERING FROM CHRONIC PERIARTHRITIS SHOULDER

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## Abstract

**Background:** Adhesive capsulitis, also known as frozen shoulder, is a condition associated with shoulder pain and stiffness. There is a loss of the ability to move the shoulder, both voluntarily and by others, in multiple directions. Hence this study was carried out the most effective among non-thrust oscillatory technique and non-thrust sustained joint lay technique in periarthritis shoulder. The study the effect of non-thrust oscillatory technique vs non-thrust sustained joint- play technique for chronic periarthritis shoulder. **Methodology:** Thirty patients were selected for this study and randomly divided into two groups A and B. Group A were received non-thrust oscillatory technique as well as Group B were received non thrust sustained joint play technique. Treatment was given 3 times per week, for 6 consecutive weeks for forty-five days with a session last for 20-25 minutes. The shoulder movement ranges were assessed by universal goniometer, before and after intervention was recorded and documented. According to this study, we only consider shoulder abduction movement, both techniques were performed and its range of motion (ROM) is measured using universal goniometer. **Result:** Patients in both groups improved significantly in all of the assessed parameters over the course of treatment; nevertheless, patients who got the non-thrust sustained joint play technique improved the most. All assessed variables recovered significantly more in patients who used the non-thrust sustained joint play approach than in those who used the non-thrust oscillatory technique, based on between-group comparisons. **Conclusion:** The result shows that the most effective technique is non-thrust sustained joint play technique.

**Keyword:** Oscillatory technique, Joint play technique, periarthritis shoulder, Goniometer.

## INTRODUCTION

Pregnancy and childbirth Frozen shoulder, also known as adhesive capsulitis or shoulder periarthritis, affects approximately 2-5% of the population, with a higher prevalence in individuals aged forty to sixty years. This condition is characterized by a gradual loss of both active and passive movement in the glenohumeral joint, attributed to capsular contracture [1]. Despite extensive research, the causes and pathology of frozen shoulder remain elusive [2]. Work-related tasks involving repeated shoulder elevation beyond 60 degrees have been identified as a risk factor for developing shoulder distress and pain, leading to frozen shoulder [3].

In frozen shoulder, patients experience difficulties in performing routine activities due to shoulder pain, resulting in a decrease in muscle strength and endurance [4]. To compensate for the loss of range of motion (ROM), patients often employ alternative muscles and increased scapular rotation during activities, leading to additional strain on other muscle groups [5]. Sleeping

disorders are common among frozen shoulder patients due to pain, making it challenging to lie on the affected shoulder [6]. Gradual loss of shoulder ROM and weakening of surrounding muscles are characteristic features of frozen shoulder [7]. Effective management of frozen shoulder involves addressing key components such as increasing shoulder active ROM, strengthening shoulder muscles, and reducing pain [8]. Despite various treatment methods, the recovery of frozen shoulder patients is often prolonged [9]. Rehabilitation for these patients typically includes exercises aimed at restoring normal shoulder kinematics and muscle movement [10]. Studies assessing the outcomes of active and passive ROM in frozen shoulder patients have been conducted, but evidence regarding the ability of rehabilitation to alter shoulder ROM patterns is lacking. This study focuses on evaluating both active and passive shoulder ROMs before and after treatment, comparing these measurements in two groups to identify the most effective method for treating frozen shoulder. The goal is to contribute

valuable insights into enhancing the understanding and management of this challenging condition, aiming for improved outcomes in frozen shoulder patients.

## METHODOLOGY

This is a comparative study; thirty patients were selected for this study. The Inclusion criteria: type 2 diabetic patients, old age people, patients with positive aply scratch test. Exclusion criteria: Patient with cardiac problems, pulmonary complications hypertension, any recent fracture and neurological conditions. The patients were assigned into 2 groups consisting of 15 members each, both the groups trained with a set of conventional exercise but in different platform i.e., group A will perform non-thrust oscillatory technique and group B on sustained joint play technique. Treatment was given 3 times per week, for 6 consecutive weeks for forty-five days with a

session last for 20-25 minutes. The shoulder movement ranges were assessed by universal goniometer, before and after intervention was recorded and documented. According to this study, we only consider shoulder abduction movement, both techniques were performed and its range of motion (ROM) is measured using universal goniometer.

## RESULT ANALYSIS

Patients in two groups showed significant improvement in all the measured variables over the treatment period, however, patients who received the non-thrust sustained joint play technique showed greater improvement and improves in range of motion than other group. Repeated measure analysis was used to see improvement in range of motion in both groups at different time intervals.

**Table 1: Analysis of pre-test score.**

Pre score	Number of subjects	Mean	Standard deviation	T value	P value
Group A	15	48	11.518	0.896	0.3777
Group B	15	44.3	11.0852		

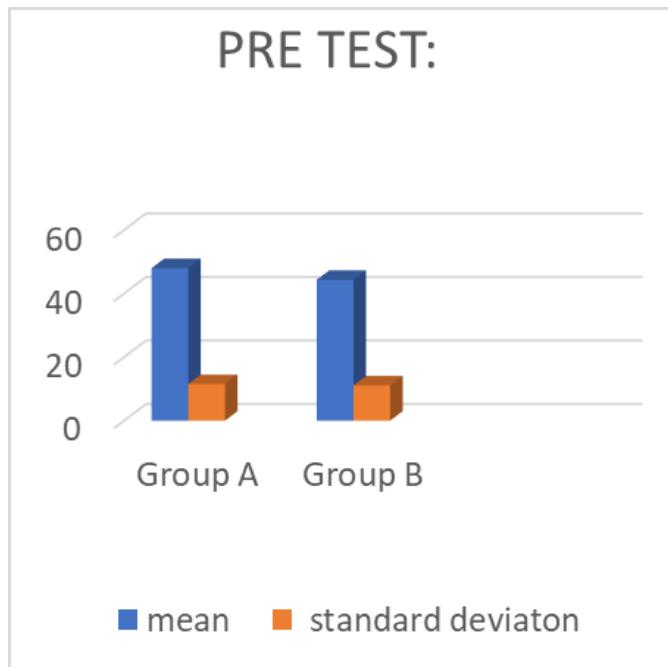
The Table 1 shows the analysis of pre-test score of group A shows mean and standard deviation were  $48 \pm 11.51$  whereas

group B shows  $44.3 \pm 11.08$ . The obtained T value was 0.896 and P value were 0.3777. Figure 1 shows analysis of pre-test.

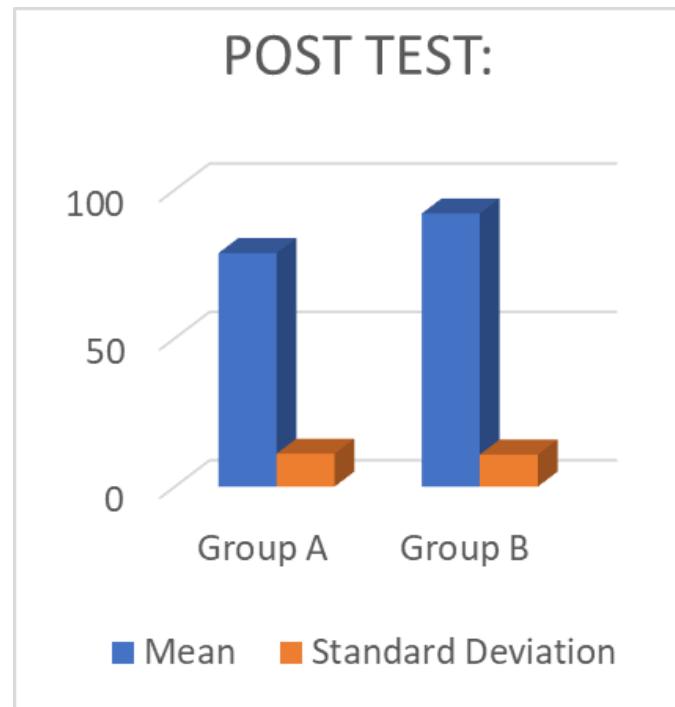
**Table 2: Analysis of post-test score**

Post score:	Number of subjects	Mean	Standard deviation	T value	P value
Group A	15	78.67	11.0855	3.1	.00782
Group B	15	92	10.77		

Table2 shows the analysis of post-test score of group A shows mean and standard deviation were  $78.67 \pm 11.085$  and group B shows  $92 \pm 10.77$ . The obtained T value was 3.1 and P value were 0.00782. Figure 2 shows significant results than figure 1.



**Fig. 1: Statistical analysis of pre-test**



**Fig. 2: Statistical analysis of post test**

**DISCUSSION**

The population for this study was chosen to be between the ages of 60 and 70. Participants' shoulder range of motion (abduction) improved significantly after finishing the training [14]. When the out-Technique measures of this study were examined, it was discovered that both groups improved significantly in abduction range of motion, with Group B (non-thrust sustained joint play technique) showing a statistically significant improvement in range of motion over Group A (non-thrust oscillatory technique), as measured with a universal goniometer [15,16]. The evidence below suggests that group B has a greater mean value than group A.

**CONCLUSION**

This comparative study using non-thrust oscillatory technique and non-thrust sustained joint play technique with chronic periarthritis shoulder showed that both intervention were effective in improves shoulder abduction. The study predicts that group B showed better improvement when compared to group A. This study conclude that non-thrust sustained joint play technique is more effective in subject with chronic periarthritis shoulder. This study will be useful for selection of intervention in chronic periarthritis shoulder subjects.

Ethical approval – Yes

Patient consent – Yes

All authors have contributed significantly towards the article

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