

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparison of the Efficacy of Manual Treatment According to Fascial Distortion Model Versus Joint Mobilization in Pain Reduction of Patients With Shoulder Impingement Syndrome Who Refer to Pirouzi Physiotherapy Clinic

#### Protocol summary

##### Study aim

Comparison of Manual Treatment According to Fascial Distortion Model Versus Joint Mobilization in Reducing Pain, Increasing Range of Motion and Improving Function of Patients With Shoulder Impingement Syndrome

##### Design

Single-blinded randomized clinical trial with parallel groups and phase 3 on 26 patients. Randomization is carried out by coin toss method.

##### Settings and conduct

Study population are patients with shoulder impingement syndrome that are referred to Pirouzi physiotherapy clinic in Mashhad.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria are: pain by arm elevation with Intensity of  $\geq 3$  on VAS and positive Neer & Hawkins-Kennedy tests. Exclusion criteria are: stroke, rheumatoid arthritis, full-thickness rotator cuff tear; trauma; surgery or freezing of the shoulder; osteoporosis or malignancy.

##### Intervention groups

In FDM group, the diagnosis is based on body language, subjective complaints, objective findings and mechanism of injury. In mobilization group, related accessory movements in glenohumeral, scapulothoracic, acromioclavicular and sternoclavicular joints are assessed in regard to the presence of pain and/or restriction. Treatment includes oscillatory movements with Maitland grading and frequency of two times per second that first is done in comfortable position and progressively toward painful position. Grades I-II and III-IV are used for pain and restriction respectively.

##### Main outcome variables

Pain intensity (VAS); pain-free abduction ROM (Goniometry); function (SPADI); patient satisfaction with treatment (Likert Scale)

#### General information

##### Reason for update

##### Acronym

FDM (Fascial Distortion Model)

##### IRCT registration information

IRCT registration number: **IRCT20200922048803N1**  
Registration date: **2021-04-20, 1400/01/31**  
Registration timing: **registered\_while\_recruiting**

Last update: **2021-04-20, 1400/01/31**

Update count: **0**

##### Registration date

2021-04-20, 1400/01/31

##### Registrant information

##### Name

Mahmood Moradi

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 51 3851 6396

##### Email address

m.moradi@razi.tums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2020-01-01, 1398/10/11

##### Expected recruitment end date

2021-09-22, 1400/06/31

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

**Trial completion date**

empty

**Scientific title**

Comparison of the Efficacy of Manual Treatment According to Fascial Distortion Model Versus Joint Mobilization in Pain Reduction of Patients With Shoulder Impingement Syndrome Who Refer to Pirouzi Physiotherapy Clinic

**Public title**

Comparison of the Efficacy of Manual Treatment according to Fascial Distortion Model Versus Joint Mobilization in Patients With Shoulder Impingement Syndrome

**Purpose**

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

Pain By Arm Elevation With Intensity of  $\geq 3$  on VAS  
Positive Neer & Hawkins-Kennedy Tests

**Exclusion criteria:**

Stroke Rheumatoid Arthritis Full-thickness Rotator Cuff  
Tear Trauma Surgery of the Shoulder Freezing of the Shoulder Osteoporosis Malignancy

**Age**

No age limit

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

- Participant

**Sample size**

Target sample size: 26

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

Randomization would be carried out by coin toss method for patients with odd number, and the patients with even number would receive the other treatment. Heads side is indicative of FDM treatment and tails side is indicative of joint mobilization.

**Blinding (investigator's opinion)**

Single blinded

**Blinding description**

The patients would be blinded in respect to allocation in either of groups.

**Placebo**

Not used

**Assignment**

Parallel

**Other design features****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Ethics committee of Tehran University of Medical Sciences

**Street address**

School of Rehabilitation of Tehran University of Medical Sciences, Piche Shemiran, Enghelab Ave, Tehran

**City**

Tehran

**Province**

Tehran

**Postal code**

1148956111

**Approval date**

2020-02-05, 1398/11/16

**Ethics committee reference number**

IR.TUMS.VCR.REC.1398.880

**Health conditions studied****1****Description of health condition studied**

Shoulder Impingement Syndrome

**ICD-10 code**

M75.4

**ICD-10 code description**

Impingement syndrome of shoulder

**Primary outcomes****1****Description**

Pain Intensity

**Timepoint**

Before and after every treatment session and after a 2 week follow up

**Method of measurement**

Visual Analogue Scale

**Secondary outcomes****1****Description**

Pain-free Abduction ROM

**Timepoint**

Before and after every treatment session and after a two week follow up

**Method of measurement**

Goniometry

**2****Description**

Function

**Timepoint**

Before the first treatment session, after the last session

and after a two week follow up

**Method of measurement**

Persian Version of SPADI

**3**

**Description**

Patient Satisfaction With Treatment

**Timepoint**

After a two week follow up

**Method of measurement**

Likert Scale

**Intervention groups**

**1**

**Description**

Intervention group: Three Sessions of Manual Treatment according to Fascial Distortion Model (Including Triggerband, Herniated Triggerpoint, Continuum, Folding, Cylinder And Tectonic) Every Other Day And Each Session Lasting 30 Minutes

**Category**

Rehabilitation

**2**

**Description**

Intervention group: Three Sessions of Joint Mobilization (Including Oscillatory Movements With Maitland Grading and a Frequency of Two Times per Second Which Are Done Initially in Resting Position and Progressively Into Painful Position of the Patient) Every Other Day and Each Session Lasting 30 Minutes

**Category**

Rehabilitation

**Recruitment centers**

**1**

**Recruitment center**

**Name of recruitment center**

Pirouzi Physiotherapy Clinic

**Full name of responsible person**

Mahmood Moradi

**Street address**

No. 536, Between 16 & 18, Pirouzi Ave.

**City**

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Razavi Khorasan

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9177969855

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m.moradi@razi.tums.ac.ir

**Sponsors / Funding sources**

**1**

**Sponsor**

**Name of organization / entity**

Tehran University of Medical Sciences

**Full name of responsible person**

Mohammad Ali Sahraian

**Street address**

Qods Ave., Keshavarz Blvd.

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**Province**

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**Postal code**

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msahrai@sina.tums.ac.ir

**Grant name**

**Grant code / Reference number**

**Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Tehran University of Medical Sciences

**Proportion provided by this source**

100

**Public or private sector**

Public

**Domestic or foreign origin**

Domestic

**Category of foreign source of funding**

empty

**Country of origin**

**Type of organization providing the funding**

Academic

**Person responsible for general inquiries**

**Contact**

**Name of organization / entity**

Tehran University of Medical Sciences

**Full name of responsible person**

Mahmood Moradi

**Position**

Master of Science Student

**Latest degree**

Bachelor

**Other areas of specialty/work**

Physiotherapy

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**Web page address**  
<https://rehab.tums.ac.ir/>

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Tehran University of Medical Sciences  
**Full name of responsible person**  
Mahmood Moradi  
**Position**  
Master of Science Student  
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## Person responsible for updating data

### Contact

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Tehran University of Medical Sciences  
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<https://rehab.tums.ac.ir/>

## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

### Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

### Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

### Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

### Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

### Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

### Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available