Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Rocabado exercises vs. Myofascial Release: Comparative effects in patients with Temporomandibular Joint Dysfunction

Protocol summary

Study aim

The aim of this study was to compare the effects of Rocabado exercises and myofascial release on pain and jaw mobility in patients with temporomandibular joint dysfunction.

Design

A single-blinded, randomized clinical trial was conducted with thirty participants included by using convenient sampling technique.

Settings and conduct

The study settings included physical therapy out patient departments of Allied Hospital and Madinah Teaching Hospital, Faisalabad. The participants were blinded of the treatment given to them.

Participants/Inclusion and exclusion criteria

The participants having age 18 to 30 years with mild to moderate temporomandibular joint dysfunction according to fonseca questionnaire and mild to moderate pain levels on numeric pain rating scale with restricted mouth opening were included in the study. the subjects with the history of any recent surgery, temporomandibular joint (TMJ) hypermobility, severe osteoporosis, unhealed fracture of mandible and advanced diabetes were excluded.

Intervention groups

There were two interventional groups named as group A (Rocabado exercises) and group B (Myofascial release technique). The participants of group A received a set of six exercises named as Rocabado exercises as a treatment. These six exercises included rest position of tongue, shoulder posture correction, stabilized cervical flexion, axial extension of neck, controlled TMJ rotation and rhythmic stabilization technique. The participants of group B received myofascial release technique as a treatment approach which included the myofascial release of masseter and temporalis muscles.

Main outcome variables

The main outcome variables were severity of dysfunction, pain, functional limitation and mouth opening range of motion.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20221006056105N2**
Registration date: **2024-05-06, 1403/02/17**
Registration timing: **retrospective**

Last update: **2024-05-06, 1403/02/17**
Update count: **0**

Registration date

2024-05-06, 1403/02/17

Registrant information

Name

Saman Salahuddin

Name of organization / entity

Madinah Teaching Hospital Faisalabad

Country

Pakistan

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-02-01, 1402/11/12

Expected recruitment end date

2024-04-12, 1403/01/24

Actual recruitment start date

2024-02-05, 1402/11/16

Actual recruitment end date

2024-04-05, 1403/01/17

Trial completion date
2024-04-30, 1403/02/11

Scientific title
Rocabado exercises vs. Myofascial Release: Comparative effects in patients with Temporomandibular Joint Dysfunction

Public title
Rocabado exercises vs. Myofascial Release: Comparative effects in patients with Temporomandibular Joint Dysfunction

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Age 18 to 30 years Mild to Moderate temporomandibular joint dysfunction according to fonseca questionnaire Decreased mouth opening Mild to moderate pain on NPRS Male and female participants Willingness to participate

Exclusion criteria:
Any recent surgery Unhealed fracture of mandible Severe osteoporosis TMJ hypermobility Advanced diabetes

Age
From **18 years** old to **30 years** old

Gender
Both

Phase
3

Groups that have been masked

- Participant

Sample size
Target sample size: **30**
Actual sample size reached: **30**

Randomization (investigator's opinion)
Randomized

Randomization description
Randomization process was done using chit and draw or lottery method. Thirty chits were made in order to allocate the participants in both groups. Thirty chits were made and with every participant coming, one chit was drawn and it happened in a way that all even numbered chits were allocated into group A while all odd ones into group B.

Blinding (investigator's opinion)
Single blinded

Blinding description
The treatment techniques used in this study are soft tissue techniques out of which one was manual and the other was exercise based. Both groups received a baseline treatment in which therapeutic ultrasound was used so the groups were similar and comparable in order to blind the participants. The groups were homogenous at baseline i.e. of same age group and of similar levels of pain and severity of dysfunction. The interventions in the two groups were sufficiently similar in terms of implementation without the use of any kind of insttument in either group.

Placebo
Not used

Assignment
Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Committee of the university of Faisalabad

Street address
P 175 Shadman Town Sargodha Road

City
Faisalabad

Postal code
38000

Approval date
2024-02-17, 1402/11/28

Ethics committee reference number
TUF/DR/SA/MSPP/2024/379

Health conditions studied

1

Description of health condition studied
Temporomandibular Joint Dysfunction

ICD-10 code
M26.60

ICD-10 code description
Temporomandibular joint disorder, unspecified

Primary outcomes

1

Description
Mouth Opening Range of Motion

Timepoint
It was measured before and after intervention.

Method of measurement
A ruler calibrated in millimeters was used to measure this outcome.

2

Description
Functional Limitation of Jaw

Timepoint
it was measured before and after treatment i.e. at baseline and at 4th week.

Method of measurement
Jaw Functional Limitation Scale was used to measure it.

Secondary outcomes

1

Description
Pain
Timepoint
it was measured before treatment and after treatment.
Method of measurement
Numeric pain rating scale was used

2

Description
Severity of dysfunction
Timepoint
before and after treatment
Method of measurement
Fonseca Anamnestic Index Questionnaire was used.

Intervention groups

1

Description
Intervention group: The participants of group A received therapeutic ultrasound (3 MHz, 1.2 W/cm2 for 3 minutes) over TMJ and simple jaw exercises as a baseline treatment. then they were given an exercise protocol which was named as Rocabado exercises which included a set of six different exercises. each exercise was repeated for 6 six times. the treatment was given thrice a week over a period of 4 weeks.
Category
Rehabilitation

2

Description
Intervention group: The participants of group B received therapeutic ultrasound (3 MHz, 1.2 W/cm2 for 3 minutes) over TMJ and simple jaw exercises as a baseline treatment. then they were given myofascial release technique for masseter and temporalis muscles. the participants were made to assume the side-lying position with affected TMJ on the top. gel was applied over these areas and then the muscles were slowly released. the treatment was given thrice a week over a period of 4 weeks.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Allied Hospital Faisalabad
Full name of responsible person
Dr. Mariam Mehmood
Street address
P 175 Shadman Town Sargodha Road
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2

Recruitment center
Name of recruitment center
Madinah Teaching Hospital
Full name of responsible person
Dr. Kishwar Batool
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
The University Of Faisalabad
Full name of responsible person
Saman Salahuddin
Street address
P 175, Shadman Town, Sargodha Road Faisalabad
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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Madinah Teaching Hospital
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

Madinah Teaching Hospital Faisalabad

Full name of responsible person

Saman Salahuddin

Position

Physiotherapist

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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Position

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Latest degree

Master

Other areas of specialty/work

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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

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable