Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Evaluating the efficacy of Telerehabilitation in comparison to conventional physiotherapy on pain and quality of life of patients with mechanical neck pain

Protocol summary

Study aim

The aim of this study was to evaluate the effectiveness of remote rehabilitation on pain and quality of life in patients with mechanical neck pain and compare it with conventional physiotherapy.

Design

Patients with randomization by Block Randomization method in one of the two groups are treated with physiotherapy in the clinic or physiotherapy through APP. A questionnaire including demographic information, VAS, NDI, SF-12 criteria will be completed by patients and the range of active neck movement will be measured by a goniometer. Patients are evaluated according to the mentioned criteria before the intervention, one month and three months after the start of treatment.

Settings and conduct

This interventional study is performed as a clinical trial in patients with mechanical neck pain who are referred to Imam Reza Hospital in Tehran.

Participants/Inclusion and exclusion criteria

Inclusion criteria include patients in the age range of 25 to 60 years who have had pain for more than 6 weeks and have been diagnosed with mechanical neck pain, their VAS level is between 3 and 8 and have a phone with Android operating system. Been. Patients who have undergone treatment or other surgery within three months or whose neck pain is due to a known trauma or is a sign of radiculopathy, paresthesia, focal neurological symptoms or danger signs are excluded from the study.

Intervention groups

neck muscle stretching exercises and strengthening exercises with emphasis on core stabilizer muscles and endurance exercises were considered. The APP group receives the exercises in the form of a video through the software, The physiotherapy group in the clinic also receives oral and written exercises after a routine cervical physiotherapy course.

Main outcome variables

VAS score, NDI, SF-12

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20201007048959N1**
Registration date: **2021-03-01, 1399/12/11**
Registration timing: **registered_while_recruiting**

Last update: **2021-03-01, 1399/12/11**
Update count: **0**

Registration date

2021-03-01, 1399/12/11

Registrant information

Name

Seyed Morteza Tabatabaee

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 4424 7340

Email address

smt.1368@ajaums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-11-15, 1399/08/25

Expected recruitment end date

2021-11-16, 1400/08/25

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluating the efficacy of Telerehabilitation in comparison to conventional physiotherapy on pain and quality of life of patients with mechanical neck pain

Public title

Evaluating the efficacy of Telerehabilitation in patients with mechanical neck pain

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

They have been in pain for more than 6 weeks and have been diagnosed with mechanical neck pain VAS score between 3 and 8 cellphone with Android operating system capable of using smartphone

Exclusion criteria:

Have another treatment or surgery within three months Their neck pain is due to a known trauma or symptoms of radiculopathy, paresthesia, focal neurological symptoms red flags such as weight loss, trauma, fever, night sweats, night pain, a history of tuberculosis infections, HIV, cancer, inflammatory diseases, and spinal tenderness

Age

From **25 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

Randomized

Randomization description

For random allocating of two groups with the same size of 25 participants (50 patients in total) we used block randomization with different block sizes. The sizes of blocks would be a multiple of 2 and a divisor of 40 (2,4,8). At first, the block sizes were selected randomly. Then, for each block, different permutations for equal group size were determined. Finally, one of the permutations was selected randomly. Random numbers were generated in an independent statistical office using Random allocation software.

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

AJA University of Medical Sciences

Street address

Imam Reza hospital, Etemad zade street, Fatemi street

City

Tehran

Province

Tehran

Postal code

1411718546

Approval date

2020-11-15, 1399/08/25

Ethics committee reference number

IR.AJAUMS.REC.1399.148

Health conditions studied

1

Description of health condition studied

Mechanical neck pain

ICD-10 code

M54.2

ICD-10 code description

Cervicalgia

Primary outcomes

1

Description

pain Visual Analogue Scale

Timepoint

0, 1, 3 months after intervention

Method of measurement

10-point visual analogue scale

2

Description

disability Visual Analogue Scale

Timepoint

0, 1, 3 months after intervention

Method of measurement

10-point visual analogue scale

3

Description

Neck Disability Index score

Timepoint

0, 1, 3 months after intervention

Method of measurement
Based on the Neck Disability Index questionnaire to assess a person's inability to neck pain

4

Description
12-Item Short Form Survey score
Timepoint
0, 1, 3 months after intervention
Method of measurement
Based on a questionnaire to assess general health in the last 4 weeks in 8 areas

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: The group that uses the APP receives the exercises in the form of a video through the software, and the software repeatedly reminds the patient to do the exercises. The software also has the feature that the patient communicates with the therapist in video or audio or text and expresses his problems with the therapist.
Category
Treatment - Other

2

Description
Control group: The physiotherapy group in the clinic also receives oral and written exercises after a routine cervical physiotherapy course.
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Imam Reza Hospital in Tehran
Full name of responsible person
Seyed Morteza Tabatabaee
Street address
No 50, 4th Golestan alley, Nahid street, Marzdaran blv
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Artesh University of Medical Sciences
Full name of responsible person
Mojtaba Yousefi Zashk
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AJA university, Etemad zade street, Fatemi street
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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Artesh 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
Artesh University of Medical Sciences
Full name of responsible person
Seyed Morteza Tabatabaee
Position
resident
Latest degree
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Person responsible for updating data

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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
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