

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Effectiveness of Neuromuscular Re-education (NMR) treatment in improving upper extremity symptoms among Smartphone using university students

Protocol summary

Study aim

Study aims is to highlight the effectiveness of Neuromuscular re-education (NMR) and Postural training as potential treatment for symptoms related to overuse of mobile phones.

Design

Design: Randomized, superiority, parallel group trial with blinded outcome assessment. sample size 30, single center.

Settings and conduct

SETTING: Study was conducted at Bashir Institute of Health Sciences, Department of Physical Therapy.

Participants/Inclusion and exclusion criteria

Participants: Thirty student participants Inclusion criteria:

- Mild to moderate symptoms on Disabilities of the Arm, Shoulder and Hand (DASH) score.
- Excessive use of smart phone device up to more than 3 hours daily.
- Complains of pains and muscular fatigue mostly in upper extremity.
- Have headache complain during prolong neck bending.

Exclusion criteria:

- History of traumatic injuries.
- Surgical interventions of the neck or upper limbs.
- Medical conditions (Diabetic neuropathy, sensory deficits).
- Chronic diseases such as rheumatoid Arthritis, osteoarthritis, and other connective tissue disorders.

Intervention groups

- For experimental group the regimen (Neuromuscular re-education & postural training) was of 30 mins, 3 days / week for 4 weeks.
- For placebo group the regimen (hot packs only) was of 10 mins, 3 days/ week for 4 weeks.

Main outcome variables

1) Disabilities of the Arm, Shoulder and Hand (DASH) score 2) Visual Analogue Scale (VAS) scale 3) Manual Muscle Testing (MMT) scale 0-5

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200504047294N1**

Registration date: **2020-06-30, 1399/04/10**

Registration timing: **retrospective**

Last update: **2020-06-30, 1399/04/10**

Update count: **0**

Registration date

2020-06-30, 1399/04/10

Registrant information

Name

Ayesha Siddiq

Name of organization / entity

Bashir institute of Health Sciences Islamabad.

Affiliated with Shaheed Zulfiqar Ali Bhutto Medical U

Country

Pakistan

Phone

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Email address

info@bashir.edu.pk

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-05-11, 1399/02/22

Expected recruitment end date

2020-05-14, 1399/02/25

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effectiveness of Neuromuscular Re-education (NMR) treatment in improving upper extremity symptoms among Smartphone using university students

Public title

Effect of NMR in university students

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

- Mild to moderate symptoms on DASH score.
- Excessive use of smart phone device up to more than 3 hours daily.
- Complaints of pains and muscular fatigue mostly in upper extremity.
- Have headache complain during prolong neck bending

Exclusion criteria:

- History of traumatic injuries.
- Surgical interventions of the neck or upper limbs.
- Medical conditions (Diabetic neuropathy, sensory deficits).
- Chronic diseases such as rheumatoid Arthritis, osteoarthritis, and other connective tissue disorders

Age

From **18 years** old to **25 years** old

Gender

Female

Phase

N/A

Groups that have been masked

- Data analyser

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization method is simple Draw. Study participants were allocated to two groups, the experimental group (n=15) and the placebo group (n=15), the grouping was completely randomized (Draw).

Blinding (investigator's opinion)

Single blinded

Blinding description

In this study participants are blinded. They only knew they are part of study not knowing to which group they belong moreover both experimental and placebo group treatment was giving on consecutive 3 weekdays.

Placebo

Used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Ethical Committee for Clinical Research (ECCR), Bashir Institute of Health Sciences (BIHS).

Street address

Bashir Medical Institute, Simly Dam Road, Near Serichochoke, Bara khau, Islamabad

City

Islamabad

Postal code

45400

Approval date

2020-04-24, 1399/02/05

Ethics committee reference number

BI-14/DPT-2015

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

1) Neck pain(Forward neck)

ICD-10 code

M54.2

ICD-10 code description

Cervicalgia

2**Description of health condition studied**

2) Musculoskeletal Pathology of upper limbs

ICD-10 code

M79.603

ICD-10 code description

Pain in arm, unspecified

3**Description of health condition studied**

tenosynovitis [de Quervain]. (texting thumb)

ICD-10 code

M65.4

ICD-10 code description

Radial styloid tenosynovitis [de Quervain]

4**Description of health condition studied**

Lateral epicondylitis (tablet elbow)

ICD-10 code

M77.1

ICD-10 code description

Lateral epicondylitis

Primary outcomes

1

Description

1)The Disabilities of the Arm, Shoulder and Hand (DASH) Score.

Timepoint

before intervention and 4 week after intervention.

Method of measurement

1) Disabilities of the Arm, Shoulder and Hand (DASH) score percentage.

2

Description

2) Visual Analog Scale VAS for pain .

Timepoint

before intervention and 4 week after intervention.

Method of measurement

Visual Analog Scale (VAS) for pain level. 0-10

3

Description

3) muscle Strength in MMT scale for NECK and Upper Extremity muscle.

Timepoint

before intervention and 4 week after intervention.

Method of measurement

Manual Muscle TEST (MMT) 0-5 scale for muscle strength of neck and U.E

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group:1)Number of participants in group: n=15. 2)Age: 18-25 years. 3)Gender: all females. 4)Mild to moderate symptoms on Disabilities of the Arm, Shoulder and Hand (DASH) questionnaire score.5)Manual Muscle testing score (MMT 0-5) 3 out of 5. 6) this group will be given exercise treatment.

Category

Treatment - Other

2

Description

Control group:1)Number of participants in group: n=15. 2)Age: 18-25 years. Gender: all females. 3)Mild to moderate symptoms on Disabilities of the Arm, Shoulder and Hand (DASH) questionnaire score.4)Manual Muscle testing score (MMT 0-5) 3 out of 5. 6) this group will be given placebo treatment.

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Bashir Institute of Health Sciences (BIHS), Islamabad.

Full name of responsible person

Dr. Nasir Khan

Street address

Bashir Institute Of Health Sciences, Near Seri choke, Simly Dam Road,Bara Kahu , Islamabad.

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Phone

+92 51 2234217

Email

dr.ayesha368@gmail.com

Web page address

<https://bashir.edu.pk/>

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Bashir Institute Of Health Sciences, Islamabad.

Full name of responsible person

Dr. Hammad Ahmad

Street address

Bashir Institute Of Health Sciences, Near Seri choke, Simly Dam Road,Bara Kahu , Islamabad.

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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

Bashir Institute Of Health Sciences, Islamabad.

Proportion provided by this source

100

Public or private sector

Private

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Person responsible for general inquiries

Contact

Name of organization / entity

Bashir Institute Of Health Sciences, Islamabad.

Full name of responsible person

Ayesha Siddiq

Position

Investigator

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

Street address

Bashir Institute Of Health Sciences, Near Seri choke,
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Person responsible for scientific inquiries

Contact

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Bashir Institute Of Health Sciences, Islamabad.

Full name of responsible person

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Person responsible for updating data

Contact

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Latest degree

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Web page address

<https://bashir.edu.pk/>

Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

"There is no further information"

Study Protocol

No - There is not 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

Yes - There is a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

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

Title and more details about the data/document

Effectiveness of Neuromuscular Re-education (NMR) treatment in improving upper extremity symptoms among Smartphone using university students

When the data will become available and for how long

starting 6 months after publication

To whom data/document is available

people working in academic institutions

Under which criteria data/document could be used

people working in academic institutions

From where data/document is obtainable

dr.ayesha368@gmail.com

What processes are involved for a request to access data/document

through email ID provided.
Comments