Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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 Siddiqa

Name of organization / entity

Bashir institute of Health Sciences Islamabad. Affiliated with Shaheed Zulfiqar Ali Bhutto Medical U

Country

Pakistan

Phone

+92 51 2234217

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. • 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

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 Seri choke,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.
City
Islamabad
Postal code
45400
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.
City
Islamabad
Postal code
45400
Phone
+92 51 2234217
Email
dr.ayesha368@gmail.com
Web page address
https://bashir.edu.pk/
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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity
Bashir Institute Of Health Sciences, Islamabad.

Full name of responsible person
Ayesha Siddiqa

Position
Investigator

Latest degree
Medical doctor

Other areas of specialty/work
Physiotherapy

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

City
Islamabad

Province
Punjab

Postal code
45400

Phone
+92 51 2234217

Email
dr.ayesha368@gmail.com

Web page address
https://bashir.edu.pk/

Person responsible for scientific inquiries

Contact

Name of organization / entity
Bashir Institute Of Health Sciences, Islamabad.

Full name of responsible person
Ayesha Siddiqa

Position
Investigator

Latest degree
Medical doctor

Other areas of specialty/work
Physiotherapy

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

City
Islamabad

Province
Punjab

Postal code
45400

Phone
+92 51 2234217

Email
dr.ayesha368@gmail.com

Web page address
https://bashir.edu.pk/

Person responsible for updating data

Contact

Name of organization / entity
Bashir Institute Of Health Sciences, Islamabad.

Full name of responsible person
Ayesha Siddiqa

Position
Investigator

Latest degree
Medical doctor

Other areas of specialty/work
Physiotherapy

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

City
Islamabad

Province
Punjab

Postal code
45400

Phone
+92 51 2234217

Email
dr.ayesha368@gmail.com

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