

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Virtual Reality Training Improves Upper Limb Functions In stroke Survivors

Protocol summary

Study aim

To determine the effects of virtual reality based training in rehabilitation of upper limb dysfunctions of stroke patients

Design

Quasi experimental design, no randomization with no blinding, only a single group of intervention

Settings and conduct

Quasi experimental Study was done at Pakistan railway General Hospital in 6 months duration (1st Jul, 2016-1st Jan, 2017)

Participants/Inclusion and exclusion criteria

Patients with any type of stroke (hemorrhagic or ischemic), age between 30 -70 years, with at least one score on box and block test were included, while stroke patients with cognitive impairments, upper limb contractures and inability to sit independently were excluded from the study.

Intervention groups

Patients were provided with traditional upper limb training protocol including passive Range of Motion (ROM), active ROM exercises, Electric Muscle Stimulation (EMS) for 10 minutes, therapeutic stretching, positional stretch and weight bearing for 15-20 minutes along with Virtual Reality Training through X-Box 360.

Main outcome variables

Fugl-Meyer Assessment (FMA-UE), Box and Block Test (BBT), and Wolf Motor Assessment Scale (WMFT)

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191107045358N2**

Registration date: **2021-04-14, 1400/01/25**

Registration timing: **retrospective**

Last update: **2021-04-14, 1400/01/25**

Update count: **0**

Registration date

2021-04-14, 1400/01/25

Registrant information

Name

Muhammad Ashar Rafi

Name of organization / entity

Shifa Tameer-e-Millat University

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Pakistan

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+92 51 8441753

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ashar.dpt@outlook.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2016-07-01, 1395/04/11

Expected recruitment end date

2016-12-01, 1395/09/11

Actual recruitment start date

2016-07-01, 1395/04/11

Actual recruitment end date

2016-12-01, 1395/09/11

Trial completion date

2016-12-01, 1395/09/11

Scientific title

Virtual Reality Training Improves Upper Limb Functions In stroke Survivors

Public title

Effect of X-Box gaming on upper limb dysfunctions of stroke patients

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients with any type of stroke (hemorrhagic or ischemic) Age between 30 -70 years At least one score on box and block test

Exclusion criteria:

Stroke patients with cognitive impairments Upper limb contractures Inability to sit independently

Age

From **30 years** old to **70 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **20**

Actual sample size reached: **20**

Randomization (investigator's opinion)

N/A

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Single

Other design features

It was a Quasi Experimental study having only one group of intervention

Secondary Ids

empty

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

Research Ethical Committee, Riphah college of Rehabilitation Sciences

Street address

Pothohar Campus, main Peshawar road. Rawalpindi

City

Rawalpindi

Postal code

46000

Approval date

2016-12-29, 1395/10/09

Ethics committee reference number

RIPHAH/RCRS/REC/Letter-168

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

Stroke

ICD-10 code

I62.9

ICD-10 code description

Nontraumatic intracranial hemorrhage, unspecified

2**Description of health condition studied**

Stroke

ICD-10 code

I63

ICD-10 code description

Cerebral infarction

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

Gross motor function

Timepoint

Before Intervention and 6th week after intervention

Method of measurement

Fugl-Meyer Assessment (FMA-UE) Score

2**Description**

Gross manual dexterity

Timepoint

Before Intervention and 6th week after intervention

Method of measurement

Box and Block Test

3**Description**

Functional capacities of upper limb

Timepoint

Before Intervention and 6th week after intervention

Method of measurement

Wolf Motor Assessment Scale (WMFT)

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group:

Category

Rehabilitation

Recruitment centers**1****Recruitment center**

Name of recruitment center

Pakistan Railways General Hospital
Full name of responsible person
Dr. Arshad Nawaz Malik
Street address
Pakistan Railways General Hospital, Railway workshop
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Riphah International University
Full name of responsible person
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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
Riphah International University
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
Shifa Tameer e Millat University
Full name of responsible person
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Position
Senior Lecturer

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Other areas of specialty/work
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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

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

Its not decided yet that will we share the IPD data or not

When the data will become available and for how long

After Publication and forever

To whom data/document is available

For general public and researchers

Under which criteria data/document could be used

Data will be published in one of the authentic journal or any data base. On request data can be shared with other researchers after reviewing their applications

From where data/document is obtainable

Data will be available through the following email address: ashar.dpt@outlook.com

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

Applicant can send an email to request data, after justification He/ She may get data within 3-4 days.

Comments