Clinical Trial Protocol
Iranian Registry of Clinical Trials

13 Nov 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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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 Qausi 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 road. Rawalpindi

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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
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Position
Senior Lecturer

Latest degree
Master

Other areas of specialty/work
Neuroscience

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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