

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Impact of "Your shape" virtual reality gaming on physical activity of young healthy females

#### Protocol summary

##### Study aim

To determine the effects of your shape virtual reality gaming on physical activity and cardiopulmonary endurance of young females

##### Design

Pretest posttest single group design

##### Settings and conduct

The study will be carried out in Department of Rehabilitation Sciences Shifa Tameer-e-Millat university, Islamabad. Subjects will be recruited based on inclusion and exclusion criteria, allocated to single group. Pretest measurements will be taken of all the participants and then intervention will be given thrice a week for 8 weeks. Subjects will be reassessed after 8 weeks.

##### Participants/Inclusion and exclusion criteria

Healthy vitally stable females with age 18-30 years will be included in the study. The participants would not be having any systemic, cardiopulmonary, neurological or orthopedic issues. Subjects undergone any surgeries in past one year will also be excluded.

##### Intervention groups

Subjects will be playing your shape gaming through Xbox 360 thrice a week for 8 weeks. Your shape includes variety of exercises including step touch, low leg combo, knee front, low squat punch, knee squat, low leg curls, sumo squats and push ups etc. There is also variation in difficulty level from easy to difficult with the passage of time.

##### Main outcome variables

VO2 max calculated through the formula  $15(HR_{max}/HR_{rest})$  Energy expenditure calculated through  $VO2 \text{ max} \times 5$  Physical activity

#### General information

##### Reason for update

##### Acronym

YSVRG

##### IRCT registration information

IRCT registration number: **IRCT20210106049949N1**

Registration date: **2021-08-11, 1400/05/20**

Registration timing: **retrospective**

Last update: **2021-08-11, 1400/05/20**

Update count: **0**

##### Registration date

2021-08-11, 1400/05/20

##### Registrant information

###### Name

Nasir Sultan

###### Name of organization / entity

Shifa Tameer-e-Millat University, Islamabad

###### Country

Pakistan

###### Phone

+92 51 8441751

###### Email address

nasir\_dpt.ahs@stmu.edu.pk

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2020-11-15, 1399/08/25

##### Expected recruitment end date

2021-06-15, 1400/03/25

##### Actual recruitment start date

2020-11-20, 1399/08/30

##### Actual recruitment end date

2020-12-10, 1399/09/20

##### Trial completion date

2021-06-20, 1400/03/30

##### Scientific title

Impact of "Your shape" virtual reality gaming on physical activity of young healthy females

##### Public title

Impact of virtual reality using your shape gaming on the physical activity level of young females

IRB#360-1180-2020

## Purpose

Health service research

## Inclusion/Exclusion criteria

### Inclusion criteria:

Healthy vitally stable young females No orthopedic problems No systemic problems

### Exclusion criteria:

Neurological disorders Balance problems, Vertebro-basilar insufficiency

## Age

From **18 years** old to **30 years** old

## Gender

Female

## Phase

1-2

## Groups that have been masked

No information

## Sample size

Target sample size: **34**

More than 1 sample in each individual

Number of samples in each individual: **2**

One pretest and one post test measurement

Actual sample size reached: **20**

More than 1 sample in each individual

Actual sample size in each individual: **20**

One pretest and one post test measurement

## Randomization (investigator's opinion)

N/A

## Randomization description

## Blinding (investigator's opinion)

Not blinded

## Blinding description

## Placebo

Not used

## Assignment

Single

## Other design features

Quasi interventional study

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Institution Review Board and Ethical committee Shifa International Hospital ,Shifa Tameer e Millat U

##### Street address

Darul Shifa Campus Street # 3 H8/1

##### City

Islamabad

##### Postal code

46000

#### Approval date

2020-11-12, 1399/08/22

#### Ethics committee reference number

## Health conditions studied

### 1

#### Description of health condition studied

Serious Gaming , Balance problems, Sedentary Life style, Physical Fitness,

#### ICD-10 code

Y93.A1

#### ICD-10 code description

Activity, exercise machines primarily for cardiorespiratory conditioning

## Primary outcomes

### 1

#### Description

The primary outcome evaluated of the study was Physical Activity (Energy Expenditure)

#### Timepoint

The primary outcomes measured at the start on base line and at the end of study.(after 3weeks )

#### Method of measurement

To measure the physical activity, the variables of cardiorespiratory fitness are assessed; VO2 max, METs and energy expenditure

## Secondary outcomes

### 1

#### Description

VO2max enhancement of Oxygen uptake

#### Timepoint

At initial session and after 3 weeks

#### Method of measurement

VO2 max through the Heart rate ratio formula= $15(HR_{max}/HR_{rest})$ . Calculated through the heart rate ratio method

### 2

#### Description

One metabolic equivalent (MET) Consumption Increased

#### Timepoint

At initial session and after 3 weeks

#### Method of measurement

Defined as the amount of oxygen consumed while sitting at rest and is equal to 3.5 ml O2 per kg body weight x min. calculated through the formula,  $VO2\ max = 3.5$

### 3

#### Description

Heart rate improvement

#### Timepoint

At initial session and after 3 weeks

#### Method of measurement

Heart rate (beats per minute) through the radial pulse

method

## Intervention groups

1

### Description

The participants were enrolled in a 4 weeks' exercise program with 12 sessions in total which was cut down to 9 sessions total in 3 weeks, every participant took 3 cardio sessions per week intermittently i-e with minimum 48 hours' interval between each session. The sessions were taken during morning and noon in a quiet separate room when participants had not had any meal 2 hours prior to the session. The participants did their exercises on yoga mats. The LED screen was 55 inches.

Participants were at least 3 meters away from the screen where the Kinect sensor could easily detect them. There was a 4 min warm-up session before every session of aerobic exercise. "Pump it" and "Hulalla" were used as the warm ups for 2 minutes each. Then the actual exercise session started that was purely aerobic and had different exercises involving both the upper limbs and the lower limbs. Participants focused on "Break a sweat A", "Break a sweat B" and "Break a sweat C" for the first half of the exercise program i-e first 4-5 sessions. And gradually transitioned towards "Break a sweat D" and "Break a sweat C" at the second half of the program i-e last 4-5 sessions. Every session included a 2-minute cool down at the end which included stretching and other cool down techniques.

### Category

Rehabilitation

## Recruitment centers

1

### Recruitment center

#### Name of recruitment center

Shifa Tameer e Millat University

#### Full name of responsible person

Dr Abdul Ghafoor Sajjad

#### Street address

Darul Shifa Campus Street # 3 H8/1

#### City

Islamabad

#### Postal code

46000

#### Phone

+92 51 8441751

#### Email

nasir\_dpt.ahs@stmu.edu.pk

#### Web page address

https://stmu.edu.pk/

## Sponsors / Funding sources

1

### Sponsor

#### Name of organization / entity

Shifa Tameer e Millat University

#### Full name of responsible person

Dr Abdul Ghafoor Sajjad

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Street # 3 Sector H8/1

#### City

Islamabad

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46000

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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

Shifa Tameer e Millat University

#### Proportion provided by this source

30

#### 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

Nasir Sultan

#### Position

Senior Lecturer

#### Latest degree

Master

#### Other areas of specialty/work

Physiotherapy

#### Street address

Darul Shifa Campus Street # 3 Sector H8/1

#### City

Islamabad

#### Province

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## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**

Shifa Tameer e Millat University

**Full name of responsible person**

Nasir Sultan

**Position**

Senior Lecturer

**Latest degree**

Master

**Other areas of specialty/work**

Physiotherapy

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## Person responsible for updating data

### Contact

**Name of organization / entity**

Shifa Tameer e Millat University

**Full name of responsible person**

Nasir Sultan

**Position**

Senior Lecturer

**Latest degree**

Master

**Other areas of specialty/work**

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## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**

Yes - There is 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**

EFFECTS OF "YOUR SHAPE" VIRTUAL REALITY GAMING ON THE PHYSICAL ACTIVITY OF HEALTHY YOUNG ADULTS OF ISLAMABAD

**When the data will become available and for how long**

The data will be Available up to December 2021 and started in January 2020 . Article about all results will be provide at the end of 2021.

**To whom data/document is available**

This data is available for all new researchers and community having problems identified in the study. Almost all aspect of physical activity are covered in this study regarding healthy individuals.

**Under which criteria data/document could be used**

Peer reviewed by authentic Reviewers selected by Journals of Health Sciences.

**From where data/document is obtainable**

this will be available on global platform on websites and in form of journal articles for readers.

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

it depends on Journal reading and displaying policy. and by contacting mentioned contact person through email.

**Comments**