

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

21 Jun 2026

### The effect of Using Virtual Reality method on the learning performance of Suturing Procedure in Students of Surgical Technology

#### Protocol summary

The purpose of this study was to evaluate the learning rate of suture function in two groups.

#### Study aim

The effect of Using Virtual Reality method on the learning performance of Suturing Procedure in Students of Surgical Technology

#### Design

In this clinical trial, 64 undergraduate students are selected randomly. Participants are divided randomly into two groups with parallel and non-blind groups according to the random number table.

#### Settings and conduct

This study will be done on undergraduate students in Isfahan University of Medical Sciences School of Nursing and Midwifery. Sampling method will be available first and then randomly assigned to two groups of traditional and virtual reality education using virtual glasses. Then in the Virtual Reality group, the teaching is on watching 3D movies made using virtual glasses, and in the traditional group, the researcher teaches the practice of suturing on replica practically. Then the suture function is evaluated in two groups.

#### Participants/Inclusion and exclusion criteria

Inclusion criteria: All participants include the students how accepted in 1397. They have informed consent to participate in the project, students how do not have minimum experience of stitching or suturing performance in the internship. Exclusion criteria include: They do not attending training session. They do not attend the exam and related exams

#### Intervention groups

Traditional group: During a one hour training session for the traditional group in the clinical skills class, they were taught 4 types of stitching (simple, close, subcutaneous, continuous) on a replica. Virtual Reality Group: These 4 types of sutures are performed separately by a researcher in a practice room (clinical skills class) on a 10 cm slice as a panoramic film with special software. This film is available for students and they can observe using virtual glasses

#### Main outcome variables

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20150715023216N5**

Registration date: **2019-10-23, 1398/08/01**

Registration timing: **retrospective**

Last update: **2019-10-23, 1398/08/01**

Update count: **0**

##### Registration date

2019-10-23, 1398/08/01

##### Registrant information

##### Name

Said Amini Rarani

##### Name of organization / entity

Isfahan University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 31 3522 6158

##### Email address

ghadami@mui.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2018-12-22, 1397/10/01

##### Expected recruitment end date

2019-06-22, 1398/04/01

##### Actual recruitment start date

2018-12-22, 1397/10/01

##### Actual recruitment end date

2019-06-22, 1398/04/01  
**Trial completion date**  
2019-06-22, 1398/04/01

**Scientific title**  
The effect of Using Virtual Reality method on the learning performance of Suturing Procedure in Students of Surgical Technology

**Public title**  
Effect of Using Virtual Reality method on the learning performance of Suturing Procedure

**Purpose**  
Education/Guidance

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
All participants are the students of the operating room 1397. They have informed consent to participate in the project. Students do not got have the least experience in suturing in an internship environment.  
**Exclusion criteria:**  
They do not attend the training session. They do not attend in the exam and related exams.

**Age**  
No age limit

**Gender**  
Both

**Phase**  
N/A

**Groups that have been masked**  
*No information*

**Sample size**  
Target sample size: **64**  
Actual sample size reached: **64**

**Randomization (investigator's opinion)**  
Randomized

**Randomization description**  
simple randomization

**Blinding (investigator's opinion)**  
Not blinded

**Blinding description**

**Placebo**  
Not used

**Assignment**  
Parallel

**Other design features**

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethics committee of Esfahan University of Medical Sciences

##### Street address

Hazar Jarib Street

##### City

Esfahan

#### Province

Isfahan

#### Postal code

۸۱۷۴۶۷۳۴۶۵

#### Approval date

2019-08-18, 1398/05/27

#### Ethics committee reference number

IR.MUI.RESEARCH.REC.1398.292

## Health conditions studied

### 1

#### Description of health condition studied

Education

#### ICD-10 code

Z55.8

#### ICD-10 code description

Other problems related to education and literacy

## Primary outcomes

### 1

#### Description

In this study, the amount of learning was measured in two groups of students.

#### Timepoint

Before and after intervention

#### Method of measurement

The questionnaire developed by the researcher

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: In the traditional group, during the training session for the traditional group for 1 hour in the clinical skills class of nursing school, they were taught 4 types of sutures (simple, continuous, subcutaneous, vertical mattress) on replica

#### Category

N/A

### 2

#### Description

intervention group: In the virtual reality group, 4 types of sutures performed separately by the researcher in the practice room (clinical skills class) on a 10 cm slice and processed as a panoramic film with computer-specific software. This film was available to students and they can observe using virtual glasses

#### Category

N/A

## Recruitment centers

1

### Recruitment center

**Name of recruitment center**

Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences

**Full name of responsible person**

Ahmad Ghadami

**Street address**

Hazar Jarib Street

**City**

Esfahan

**Province**

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**Postal code**

۸۱۷۴۶۷۳۴۶۵

**Phone**

+98 31 3792 7561

**Email**

ghadami@nm.mui.ac.ir

## Sponsors / Funding sources

1

### Sponsor

**Name of organization / entity**

Esfahan University of Medical Sciences

**Full name of responsible person**

Shaghayegh Haghju

**Street address**

Hazar Jarib Street

**City**

Esfahan

**Province**

Isfahan

**Postal code**

81746-73461

**Phone**

+98 31 3668 0048

**Email**

research@mui.ac.ir

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Esfahan University of Medical Sciences

**Proportion provided by this source**

100

**Public or private sector**

Public

**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**

Esfahan University of Medical Sciences

**Full name of responsible person**

Dr. Ahmad Ghadami

**Position**

Assistant Professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Nursery

**Street address**

Hazar Jarib Street

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## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**

Esfahan University of Medical Sciences

**Full name of responsible person**

Dr. Ahmad Ghadami

**Position**

Assistant Professor

**Latest degree**

Ph.D.

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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**

No - There is not a plan to make this available

**Statistical Analysis Plan**

No - There is not a plan to make this available

**Informed Consent Form**

No - There is not a plan to make this available

**Clinical Study Report**

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

**Analytic Code**

No - There is not a plan to make this available

**Data Dictionary**

No - There is not a plan to make this available