Clinical Trial Protocol
Iranian Registry of Clinical Trials

23 Sep 2026

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

Protocol summary

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

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

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

Isfehan

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

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Hazar Jarib Street

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Esfahan University of Medical Sciences

Full name of responsible person
Shaghayegh Haghju

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81746-73461

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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

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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