

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

05 Jul 2026

### Comparison of simulation training based on mannequins method with virtual method on the learning rate of cardiopulmonary resuscitation of nursing students

#### Protocol summary

##### Study aim

Comparison of simulation training method with virtual method on learning cardiopulmonary resuscitation of nursing students

##### Design

First, education in both groups is provided to research units in the same way and virtually, information related to cardiopulmonary resuscitation knowledge. In fact, the educational content in both groups is completely the same and the teaching method is different in the two groups.

##### Settings and conduct

The study population is third year students (semesters 5 and 6) of nursing in Shahroud University of Medical Sciences who, after obtaining the necessary permits from the Vice Chancellor for Education of the faculty and university, enter the study in an accessible manner.

##### Participants/Inclusion and exclusion criteria

The study population is third year students (semesters 5 and 6) of nursing in Shahroud University of Medical Sciences. Admission requirements include being a student at the same university, not being conditional in the previous semester, not having work experience and a nursing diploma, not attending CPR training courses, and not having relevant work experience. Also, if the learners do not want to participate in the study or do not have the conditions to participate in the training sessions, the cases will be completely removed.

##### Intervention groups

Third year students (semesters 5 and 6) are nursing students of Shahroud University of Medical Sciences. In the e-learning group, the method of showing images through slides and related videos is used. In the simulation group, a hypothetical patient scenario is designed for students and in the simulated conditions, students in groups of 5-7 people discuss and perform resuscitation on the mannequin.

#### Main outcome variables

Learning

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20210804052074N1**

Registration date: **2022-01-15, 1400/10/25**

Registration timing: **retrospective**

Last update: **2022-01-15, 1400/10/25**

Update count: **0**

##### Registration date

2022-01-15, 1400/10/25

##### Registrant information

##### Name

mahdi sadeghi

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 23 3237 4581

##### Email address

mahdisadeghi159@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2021-08-23, 1400/06/01

##### Expected recruitment end date

2021-09-11, 1400/06/20

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

**Trial completion date**  
empty

**Scientific title**  
Comparison of simulation training based on mannequins method with virtual method on the learning rate of cardiopulmonary resuscitation of nursing students

**Public title**  
Comparison of simulation training based on mannequins method with virtual method on the learning rate of cardiopulmonary resuscitation

**Purpose**  
Education/Guidance

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
Being a student of the same university not being conditional in the previous semester not having work experience not participating in CPR training courses  
**Exclusion criteria:**  
Students' unwillingness to participate in the study not being able to participate in the training sessions completely

**Age**  
No age limit

**Gender**  
Both

**Phase**  
N/A

**Groups that have been masked**

- Care provider
- Data analyser

**Sample size**  
Target sample size: **60**

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

**Randomization description**  
Two classes will be assigned by simple random method (using lottery), one to the e-learning group and the other class to the simulation group. In order to randomize, according to the bias caused by the transfer of information, students of the two groups, students entering Mehr in one group and students entering Bahman of the same year are placed in the second group.

**Blinding (investigator's opinion)**  
Double blinded

**Blinding description**  
In this study, due to the nature of the study, it is not possible for participants to be cursed, but information collectors and data analysts will be cursed and will not know how to assign individuals to the two groups.

**Placebo**  
Not used

**Assignment**  
Parallel

**Other design features**  
This research is a parallel quasi-experimental study that aims to compare the effect of virtual education and simulation in relation to CPR of nursing students.

Inclusion criteria will be replaced. The trainings will be provided for both groups with the strict supervision of the researcher and with the help of two faculty members.

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Shahroud University of Medical Sciences

##### Street address

Tehran

##### City

Shahroud

##### Province

Semnan

##### Postal code

۳۶۱۴۷-۷۳۹۴۷

#### Approval date

2021-05-08, 1400/02/18

#### Ethics committee reference number

IR.SHMU.REC.1400.037

## Health conditions studied

### 1

#### Description of health condition studied

Educational method

#### ICD-10 code

#### ICD-10 code description

## Primary outcomes

### 1

#### Description

learning

#### Timepoint

12 months

#### Method of measurement

Knowledge Assessment Questionnaire

## Secondary outcomes

### 1

#### Description

learning

#### Timepoint

Zero, one and six months after training

#### Method of measurement

questionnaire

2

**Description**

Education

**Timepoint**

Zero, one and six months after training

**Method of measurement**

Education

**Intervention groups**

1

**Description**

Intervention group: In the e-learning group, the method of showing images through slides and questions and answers is used to clarify the ambiguities and eliminate possible problems. On the second day, the relevant videos will be shown, which will show the required skills, and if there are any questions or ambiguities for the students, the researchers will answer them in order to fully clarify the topics for the students.

**Category**

Behavior

2

**Description**

Control group: In the simulation group, on the first day, students will be taught information about cardiopulmonary resuscitation knowledge for one hour on modeling. Then, on the second day, a hypothetical patient scenario is designed for the students and with all the necessary facilities and equipment, the scenario is performed and in the simulated conditions, the students in groups of 5-7 people discuss and perform resuscitation on the mannequin. At the end of the scenario, students will be asked to discuss the actions taken with the instructor in the group

**Category**

Behavior

**Recruitment centers**

1

**Recruitment center**

**Name of recruitment center**

Shahroud University of Medical Sciences

**Full name of responsible person**

Mahdi Sadeghi

**Street address**

Tehran

**City**

Shahroud

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Semnan

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**Sponsors / Funding sources**

1

**Sponsor**

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Shahroud University of Medical Sciences

**Full name of responsible person**

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**Web page address**

<https://shmu.ac.ir/fa>

**Grant name**

**Grant code / Reference number**

**Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Shahroud 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**

Shahroud University of Medical Sciences

**Full name of responsible person**

Mahdi Sadeghi

**Position**

Non-faculty instructor

**Latest degree**

Master

**Other areas of specialty/work**

Nursery

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## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Shahroud University of Medical Sciences  
**Full name of responsible person**  
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## Person responsible for updating data

### Contact

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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

By publishing an article and participating in conferences

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

12 month

### To whom data/document is available

Researchers, colleagues and the person in charge of the information analyst

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

If the article is published

### From where data/document is obtainable

Corresponding Author

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

The request is given via email published in the article

### Comments