Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Comparison effect of cardiopulmonary resuscitation education with serious game on the base of smart phone and simulation methods on knowledge, attitude and performance of nursing students

Protocol summary

Study aim

1. Comparison effect of cardiopulmonary resuscitation education with serious game on the base of smart phone and simulation methods on knowledge, attitude and performance of nursing students. 2. Enhance of knowledge, attitude and performance, preservation and transfer of knowledge, Reduction of learning costs, Reducing the complications and death

Design

This study is a randomized controlled trials. The first semester students of AJA Nursing College will be randomly assigned into two groups of test and one control group. Randomization will be done using SPSS software version 23. With a 10% attrition rate the sample size will be 18 in each group and 54 in a total.

Settings and conduct

The simulation training place is the practice hall of the faculty of Aja Nursing College and the training will be executed using a mannequin. Essential training will be given to the students on how to install and execute game.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Tendency to participate in the study; Having a smart phone which the requested game to be installed & running; First semester students Non inclusion criteria: Having training experience; Clinical experience; Paramedic

Intervention groups

Students in the two test groups will undergo serious game and simulation. There is no intervention on the control group.

Main outcome variables

Kknowledge; attitude; performance

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20150801023446N19**
Registration date: **2018-10-12, 1397/07/20**
Registration timing: **retrospective**

Last update: **2018-10-12, 1397/07/20**
Update count: **0**

Registration date

2018-10-12, 1397/07/20

Registrant information

Name

Fatemeh Teymouri

Name of organization / entity

AJA University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 5588 0283

Email address

z.farsi@ajaums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-08-21, 1397/05/30

Expected recruitment end date

2018-09-04, 1397/06/13

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison effect of cardiopulmonary resuscitation education with serious game on the base of smart phone and simulation methods on knowledge, attitude and performance of nursing students

Public title
Effect of cardiopulmonary resuscitation education on knowledge, attitude and performance
Purpose
Education/Guidance
Inclusion/Exclusion criteria
Inclusion criteria:
Tendency to participate in the study Having a smart phone which the requested game to be installed & running First semester students
Exclusion criteria:
Facing with the process of cardiopulmonary resuscitation Paramedic having a training experience (theoretical and practical) about cardiopulmonary resuscitation having clinical experience in health environments
Age
No age limit
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **54**
Randomization (investigator's opinion)
Randomized
Randomization description
This study is a randomized controlled trials. First semester students of AJA nursing faculty will be randomly assigned into two groups of test and one control group. Randomization will be done using SPSS software version 23.
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 Aja University of Medical Sciences
Street address
floor 5th ,Block 10th ,Besat Town, Sanaye Ave, Langari Ave, Nobonyad Sq, Pasdaran Ave, Tehran
City
Tehran
Province
Tehran
Postal code
1693716573
Approval date
2017-12-28, 1396/10/07
Ethics committee reference number
IR.AJAUMS.REC.1396.69

Health conditions studied

1

Description of health condition studied
cardiopulmonary resuscitation
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Knowledge of nursing students of AJA University of Medical Sciences
Timepoint
Before the start of intervention and 2 weeks later
Method of measurement
Knowledge questionnaire

2

Description
Attitude of nursing students of AJA University of Medical Sciences
Timepoint
Before the start of intervention and 2 weeks later
Method of measurement
Attitude questionnaire

3

Description
Performance of nursing students of AJA University of Medical Sciences
Timepoint
Before the start of intervention and 2 weeks later
Method of measurement
Performance questionnaire

Secondary outcomes

empty

Intervention groups

1

Description
First intervention group (A serious game on the base of

smartphone): Students will be given tutorials on how to install games on a smartphone and run them in the software environment by a researcher during a training session in the presence of supervisors and counselors. For two weeks, students will be given time to study cardiopulmonary resuscitation using the software environment they are provided. Then, the test will be done again.

Category

N/A

2

Description

Second intervention group: Simulation. The training is carried out by a researcher supervised by supervisors and consultants based on the scenario and will be performed on the cardiopulmonary resuscitation (KAR / CPR180S × 1PCS; China). Students will attend two sessions, each of which will last for at least 45 minutes. Then, the knowledge, attitude and practice questionnaire will be completed immediately and two weeks after the completion of training sessions by simulation method.

Category

N/A

3

Description

Control group: No education

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Nursing School, AJA University of Medical Sciences

Full name of responsible person

Mahdieh Yazdani

Street address

Nursing university of Aja, Moghadam Ave, Shariati Ave, Tehran

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Web page address

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Artesh University of Medical Sciences

Full name of responsible person

Mahdieh Yazdani

Street address

Etemadzade Shahid Ave, West Fatemi Ave, Tehran

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Grant name

50000000

Grant code / Reference number

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

Yes

Title of funding source

Artesh 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

Artesh University of Medical Sciences

Full name of responsible person

Mahdieh Yazdani

Position

Master student in Nursing

Latest degree

Bachelor

Other areas of specialty/work

Nursery

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floor 5th ,Block 10th ,Besat Town, Sanaye Ave, Langari Ave, Nobonyad Sq, Tehran

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Person responsible for scientific inquiries

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Full name of responsible person
Mahdieh Yazdani
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Latest degree
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
There is no more information
Study Protocol
Undecided - It is not yet known if there will be a plan to make this available
Statistical Analysis Plan
Not applicable
Informed Consent Form
Undecided - It is not yet known if there will be 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
Not applicable
Data Dictionary
Not applicable