

Clinical Trial Protocol

Iranian Registry of Clinical Trials

21 Jul 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)

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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		City Tehran Province Tehran Postal code 1693716573 Approval date 2017-12-28, 1396/10/07 Ethics committee reference number IR.AJAUMS.REC.1396.69	
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 <i>No information</i> 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		Health conditions studied <u>1</u> Description of health condition studied cardiopulmonary resuscitation ICD-10 code ICD-10 code description Primary outcomes <u>1</u> 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 <u>2</u> 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 <u>3</u> 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 Ids empty		Secondary outcomes empty	
Ethics committees <u>1</u> 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		Intervention groups <u>1</u> 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

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Artesh University of Medical Sciences

Full name of responsible person

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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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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