Clinical Trial Protocol
Iranian Registry of Clinical Trials

28 Sep 2026

The effect of computer-based simulator on basic clinical psychomotor skill performanceand patients prepration for intubation and laryngoscopy by undergraduate anesthesist students in Tehran University of Medical Sciences

Protocol summary

Study aim

Determine the impact of using a computer-based simulator on students' functional error in performing laryngoscopy skills.

Design

The experimental study, with two groups of control and intervention, is a blinded one on 26 second semester undergraduate students of Anesthesiology, University of Tehran, in the 96-97 academic year.

Settings and conduct

Students in Tehran University of Medical Sciences are randomly assigned to two groups of control and intervention. A control group without any intervention in the skill lab performed by an experienced anesthetist and through a checklist (based on the Objective Structured Assessment of Technical Skills) are evaluated. The simulation content intervention group plus video pictures with descriptions, and animations to emphasize important points, and students will be able to view the content as desired before entering Skill Lab. It is then evaluated in an skill lab by an experienced anesthetist and through a checklist (compiled on the OSATS checklist). The evaluator will not be aware of belonging to any group. The scores obtained from both groups are compared to determine the effectiveness of using multimedia content and the number of errors in the patient's preparation is also observed and compared to the two groups.

Participants/Inclusion and exclusion criteria

All second semester students of Anesthesiology who have completed compulsory and routine course on airway management training through lectures and participating in Skill lab at Tehran University of Medical Sciences and have informed consent to participate in the project.

Intervention groups

A control group that is evaluated without any intervention, and an intervention group giving simulated content plus video images with descriptions, and animations to emphasize important points. Students can view this content as often as they like before entering the Skill Lab.

Main outcome variables

Functional error

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20090127001599N26**
Registration date: **2018-02-14, 1396/11/25**
Registration timing: **prospective**

Last update: **2018-02-14, 1396/11/25**
Update count: **0**

Registration date

2018-02-14, 1396/11/25

Registrant information

Name

Mitra Zolfaghari

Name of organization / entity

Tehran University of Medical Sciences and Health Services

Country

Iran (Islamic Republic of)

Phone

+98 21 6692 7171

Email address

zolfaghm@tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date
2018-04-04, 1397/01/15
Expected recruitment end date
2018-05-05, 1397/02/15
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The effect of computer-based simulator on basic clinical psychomotor skill performanceand patients prepration for intubation and laryngoscopy by undergraduate anesthesist students in Tehran University of Medical Sciences

Public title
The effect of computer-based simulator on basic clinical psychomotor skill performanceand patients prepration for intubation and laryngoscopy by undergraduate anesthesist students in Tehran University of Medical Sciences
Purpose
Other
Inclusion/Exclusion criteria
Inclusion criteria:
Participants are second semester undergraduate students who have completed standard and routine airway management training through lectures and a two-hour Skill Lab session at Tehran University of Medical Sciences.
Exclusion criteria:
lack of consent to participate in the project
Age
No age limit
Gender
Both

Phase
N/A
Groups that have been masked

- Outcome assessor

Sample size
Target sample size: **26**
Randomization (investigator's opinion)
Randomized
Randomization description
The names of the students who are willing to participate in the project are tabulated and divided using random numbers into two groups of intervention and control.
Blinding (investigator's opinion)
Single blinded
Blinding description
In this study, the control group without intervention and the intervention group after intervention received a separate assessment. In both stages, the evaluator is unaware of whether or not they have received the intervention.
Placebo
Not used
Assignment
Other
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics Committee, Vice-Chancellor for Research, Tehran University of Medical Sciences
Street address
Qods St, Keshavarz Blvd.Tehran,
City
Tehran
Province
Tehran
Postal code
1417653761
Approval date
2017-12-10, 1396/09/19
Ethics committee reference number
IR.TUMS.VCR.REC.1396.4180

Health conditions studied

1

Description of health condition studied
Functional error
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Functional error
Timepoint
A week after receiving the simulator
Method of measurement
Using the OSATS (Objective Structured Assessment of Technical Skills)

Secondary outcomes

empty

Intervention groups

1

Description
The control group is evaluated without an intervention in

the skill lab by an experienced anesthetist and through a checklist (developed according to the OSATS checklist). This assessment involves preparing the patient, choosing the correct equipment for

Category

Other

2

Description

The intervention group is provided with simulated content, and students can view the content as often as they wish before entering the Skill Lab. (Submission of this content to the intervention group after the evaluation of the control group is performed

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Tehran university of medical science

Full name of responsible person

Saba Abbasi

Street address

Qods St, Keshavarz Blvd, Tehran

City

Tehran

Province

Tehran

Postal code

1417653761

Phone

+98 21 81631

Email

Cs_abbasi@yahoo.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

Dr Mitra Zolfaghari

Street address

Qods St, Keshavarz Blov, Tehran

City

Tehran

Province

Tehran

Postal code

1417653761

Phone

+98 21 81631

Email

Cs_abbasi@yahoo.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Tehran 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

Tehran University of Medical Sciences

Full name of responsible person

Saba Abbasi

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

Anesthesiology

Street address

Hassan Aabad Sq, Emam khomini St, Sina hospital

City

Tehran

Province

Tehran

Postal code

١١٣٦٧٤٦٩١١

Phone

+98 21 63120

Email

Cs_abbasi@yahoo.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

Mitra Zolfaghari

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

Medical Education

Street address

Naderi st. Keshavarz Blv. Virtual School. Tehran University of Medical Sciences

City

Tehran

Province
Tehran

Postal code
1417653761

Phone
+98 21 6692 7171

Fax
+98 21 6693 3600

Email
zolfaghm@tums.ac.ir

Person responsible for updating data

Contact

Name of organization / entity
Tehran University of Medical Sciences

Full name of responsible person
Mitra Zolfaghari

Position
Associate professor

Latest degree
Ph.D.

Other areas of specialty/work
Medical Education

Street address
Tohid Sq. East Nosrat St. Nursing and Midwifery Care Research Center.

City
Tehran

Province
Tehran

Postal code
1417653761

Phone
+98 21 6692 7171

Fax
+98 21 6693 3600

Email
zolfaghm@tums.ac.ir

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

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

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

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