

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

12 Sep 2026

### A comparison of the conceptual map and the traditional lecture method on students' learning based on the VARK learning styles model

#### Protocol summary

##### Study aim

Comparison of the effects of the conceptual map and the lecture method on nursing students' learning based on the VARK learning styles model

##### Design

In this randomized controlled study, two arm parallel group, 160 students with four different learning styles were randomly assigned to the intervention (conceptual map) or control (traditional lecture) groups by pulling cards from a box.

##### Settings and conduct

This study was performed in a nursing and midwifery school in the east of Iran during the second academic semester of 2017. 160 students with four different learning styles were selected using convenience sampling method and were randomly assigned to the intervention (teaching based on conceptual map) or control (teaching based on traditional lecture) groups. After the completion of the six teaching sessions, the post-assessment of students in all the groups was performed at the same time in order to compare the effect of educational methods related to all the four learning styles.

##### Participants/Inclusion and exclusion criteria

The inclusion criteria were as follows: Those who were enrolled in medical-surgical nursing course with a focus on hepatic disorders; had no prior knowledge of concept map method. The exclusion criteria were as follows: Students who had passed the course and were absent from in more than one session were excluded from the study.

##### Intervention groups

The intervention group: in this group, students were taught, medical surgical nursing course, by the conceptual map method during six weeks. The control group: in this group, students were taught, medical surgical nursing course, by the traditional lecture method during six weeks.

##### Main outcome variables

Facilitation of deeper learning for students based on their different learning styles

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20140409017197N3**

Registration date: **2018-10-28, 1397/08/06**

Registration timing: **retrospective**

Last update: **2018-10-28, 1397/08/06**

Update count: **0**

##### Registration date

2018-10-28, 1397/08/06

##### Registrant information

##### Name

Sara Amanian

##### Name of organization / entity

Nursing and Midwifery School of Tehran University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 83 1724 9584

##### Email address

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##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2016-11-21, 1395/09/01

##### Expected recruitment end date

2017-08-23, 1396/06/01

##### Actual recruitment start date

2016-11-21, 1395/09/01

**Actual recruitment end date**

2017-08-23, 1396/06/01

**Trial completion date**

2017-08-23, 1396/06/01

**Scientific title**

A comparison of the conceptual map and the traditional lecture method on students' learning based on the VARK learning styles model

**Public title**

A comparison of the conceptual map and the traditional lecture method on students' learning based on the VARK learning styles model

**Purpose**

Education/Guidance

**Inclusion/Exclusion criteria****Inclusion criteria:**

Those who were enrolled in medical-surgical nursing course with a focus on hepatic disorders Those who had no prior knowledge of concept map method

**Exclusion criteria:**

Students who had passed the medical surgical nursing course (with a focus on hepatic disorders) previously

**Age**

No age limit

**Gender**

Both

**Phase**

N/A

**Groups that have been masked***No information***Sample size**Target sample size: **160**Actual sample size reached: **160****Randomization (investigator's opinion)**

Randomized

**Randomization description**

Students were selected using convenience method and they were randomly assigned to the intervention (taught by the conceptual map method) and control (taught by the traditional lecture method) groups. Random assignments were accomplished by pulling a group-assignment card from a box by each student.

**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 Iranshahr University of Medical Sciences

**Street address**

Balooch Blvd., Iranshahr University of Medical Sciences

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Iranshahr

**Province**

Sistan-va-Balouchestan

**Postal code**

9914786138

**Approval date**

2016-07-02, 1395/04/12

**Ethics committee reference number**

IR.IRSHUMS.REC.1395.8

**Health conditions studied****1****Description of health condition studied**

Learning based on teaching methods

**ICD-10 code****ICD-10 code description****Primary outcomes****1****Description**

Learning based on different teaching methods with regard to learning styles

**Timepoint**

Before and after intervention for each group

**Method of measurement**

a researcher-made pre and post-assessment questionnaire including 20 questions in the domain of knowledge and 20 questions related to the domain of meaningful learning

**Secondary outcomes**

empty

**Intervention groups****1****Description**

Intervention group: In this group, students were taught medical surgical nursing course, by the conceptual map method during six weeks.

**Category**

Other

**2****Description**

Control group: In this group, students were taught medical surgical nursing course, by the traditional lecture method during six weeks.

**Category**

Other

**Recruitment centers**1**Recruitment center****Name of recruitment center**

Faculty of Nursing and Midwifery, Iranshahr, Iran

**Full name of responsible person**

Vahideh Pouyesh

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**Sponsors / Funding sources**1**Sponsor****Name of organization / entity**

Iranshahr University of Medical Sciences

**Full name of responsible person**

Asiyeh Dejkam

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**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Iranshahr 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**

Sara

**Position**

Graduated student

**Latest degree**

Master

**Other areas of specialty/work**

Nursery

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**Person responsible for scientific inquiries****Contact****Name of organization / entity**

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**Position**

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**Latest degree**

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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**

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