

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 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

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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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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 centers1**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 sources1**Sponsor****Name of organization / entity**

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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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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