

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

15 Jun 2026

### Investigating the impact of the debate teaching-learning method on the development of skills and abilities of dental students

#### Protocol summary

##### Study aim

Determining the impact of the debate teaching-learning method on the development of dental students' skills and abilities

##### Design

Randomized trial of pretest, post-test, without control group design for 62 dental students

##### Settings and conduct

This study is conducted in the Faculty of Dentistry of Hamadan University of Medical Sciences. All students who have community oral health 2 (practical) course in the first half of the academic year 2022-2023 included in the study. Before the intervention, the students randomly divided into 7 groups of 8-10 people. A specific topic was assigned to each group. The topics are: fluoride application in dentistry, amalgam in dental restorations, antibiotics in dentistry, dental treatments in pregnancy, e-cigarettes, use and non-use of fissure sealants in dentistry, emphasis on performing hygienic behaviors or impact on Social determinant of oral health. These topics were chosen because there are some vague on their application in dentistry. The intervention is the implementation of debate method on given topics. The debate process consists of 3 main areas: 1) preliminary preparation 2) debate 3) evaluation and feedback.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: Students who have community oral health 2 (practical) course in the first half of the academic year 2022-2023, student's consent to participate in the study. Exclusion criteria: A student who worked on a thesis or a study related to the topic assigned to him/her.

##### Intervention groups

Implementing the teaching-learning method of debate on the development of skills and abilities of dental students

##### Main outcome variables

Knowledge, students' perceptions of their skills and their level of skills (critical thinking, rhetoric, reasoning, interpretation and analysis of information, finding and using scientific databases, analysis and evaluation of

evidence), student satisfaction

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20141128020129N3**

Registration date: **2022-11-21, 1401/08/30**

Registration timing: **registered\_while\_recruiting**

Last update: **2022-11-21, 1401/08/30**

Update count: **0**

##### Registration date

2022-11-21, 1401/08/30

##### Registrant information

##### Name

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 81 3838 0511

##### Email address

s.shirahmadi@umsha.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2022-10-24, 1401/08/02

##### Expected recruitment end date

2023-02-19, 1401/11/30

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

## Scientific title

Investigating the impact of the debate teaching-learning method on the development of skills and abilities of dental students

## Public title

Investigating the effect of the debate teaching method on the skills and abilities of dental students

## Purpose

Education/Guidance

## Inclusion/Exclusion criteria

### Inclusion criteria:

All students who have community oral health 2 (practical) in the first half of the academic year 2022-2023 student's consent to participate in the study

### Exclusion criteria:

Students who have done research or thesis in the assigned topic.

## Age

No age limit

## Gender

Both

## Phase

N/A

## Groups that have been masked

No information

## Sample size

Target sample size: 62

## Randomization (investigator's opinion)

N/A

## Randomization description

## Blinding (investigator's opinion)

Not blinded

## Blinding description

## Placebo

Not used

## Assignment

Single

## Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

The Ethics Committee of Hamadan University of Medical Sciences

##### Street address

4th floor, Headquarters of the University of Medical Sciences, Shahid Fahmideh St., Pajuhesh square

##### City

Hamadan

##### Province

Hamadan

##### Postal code

6517838636

#### Approval date

2022-10-22, 1401/07/30

## Ethics committee reference number

IR.UMSHA.REC.1401.644

## Health conditions studied

### 1

#### Description of health condition studied

Knowledge, students' perceptions of their skills and level of skills (critical thinking, rhetoric, reasoning, interpretation and analysis of information, finding and using scientific databases, analysis and evaluation of evidence) and the level of students' satisfaction

#### ICD-10 code

#### ICD-10 code description

## Primary outcomes

### 1

#### Description

level of knowledge

#### Timepoint

Before the start of the study, immediately after the end of the intervention

#### Method of measurement

Standard questionnaire

### 2

#### Description

The level of critical thinking skills

#### Timepoint

During the debate

#### Method of measurement

Check list

### 3

#### Description

Level of rhetorical

#### Timepoint

During the debate

#### Method of measurement

Check list

### 4

#### Description

The level of Reasoning

#### Timepoint

During the debate

#### Method of measurement

Check list

### 5

#### Description

The level of interpretation and analysis of information

#### Timepoint

During the debate

## Method of measurement

Check list

## 6

### Description

The level of ability to find and use scientific databases

### Timepoint

During the debate

### Method of measurement

Check list

## 7

### Description

The level of ability to analyze and evaluation of the evidence

### Timepoint

During the debate

### Method of measurement

Check list

## 8

### Description

The level of satisfaction

### Timepoint

Immediately after the end of the intervention

### Method of measurement

Standard questionnaire

## 9

### Description

Students' perceptions of their abilities

### Timepoint

Before the start of the study, immediately after the end of the intervention

### Method of measurement

Standard questionnaire

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: The intervention consists of the implementation of debate by students in groups. Before starting the intervention, the students randomly divided into 7 groups of 8-10 and a specific topic was assigned to each group (fluoride application in dentistry, amalgam usage in dental restorations, antibiotics in dentistry, dental treatments in pregnant women, e-cigarettes and oral health, the use and non-use of fissure sealant, emphasize on performing health behaviors or influencing social factors affecting oral health). The debate process includes 3 main areas: 1) preliminary preparation, 2) debate, 3) evaluation and feedback. 1) Preparation: a) Each group randomly divides into two smaller groups of

4 or 5 people and the same topic gives to pair groups. First, before research on the assigned topic, higher-order cognitive skills of the students will be assessed by controversial hypothesis in the form of a case. Also, students should complete perception of skills pretest questionnaires. Students have one week to get general information based on the hypothesis and their topics. All the students in a group should research some evidence both for and against the topic. b) In the next session, each group will be assigned a position (for or against) on the controversial subject in order to study deeply and present persuasive arguments. 2) Implementation of the debate: The debate takes place in the classroom around a U-shaped table based on the method of the structured debate. Its duration is 20-25 minutes and 5 minutes for the final argument. Simultaneously with the implementation of the debate, a panel of judges (module provider teaching staff and students) evaluates the performance of the debaters based on a checklist. Faculty members act as supervisors and guide the students in the processes of debate. 3) Evaluation and feedback: The teachers give their opinions to the students about the preparation process and the discussion itself. Finally, students should complete higher-order cognitive skills, perception of skills and satisfaction post test questionnaires.

#### Category

Other

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

School of Dentistry, Hamadan University of Medical Sciences, Hamadan, Iran

##### Full name of responsible person

Ebrahim Yarmohammadi

##### Street address

School of Dentistry, Hamadan University of Medical Sciences, Shahid Fahmideh St., Pajuhesh square

##### City

Hamadan

##### Province

Hamadan

##### Postal code

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##### Phone

+98 81 3838 1059

##### Email

Webda@umsha.ac.ir

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Hamedan University of Medical Sciences

##### Full name of responsible person

Reza Shokoohi

**Street address**

4th floor, Headquarters of the University of Medical Sciences, Shahid Fahmideh St., Pajuhesh square

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**Province**

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**Phone**

+98 81 3131 4058

**Email**

Info.research@umsha.ac.ir

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

Yes

**Title of funding source**

Hamedan 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**

Hamedan University of Medical Sciences

**Full name of responsible person**

Samane Shirahmadi

**Position**

Associate professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Health Promotion

**Street address**

Department of Community Oral Health, School of Dentistry, Hamadan University of Medical Sciences, Shahid Fahmideh St., Pajuhesh square

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**Phone**

+98 81 3838 1059

**Fax****Email**

s.shirahmadi@umsha.ac.ir

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

Hamedan University of Medical Sciences

**Full name of responsible person**

Marjaneh Meschi

**Position**

Associate professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Dentistry

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marjanehmeschi@yahoo.com

**Person responsible for updating data****Contact****Name of organization / entity**

Hamedan University of Medical Sciences

**Full name of responsible person**

Samane Shirahmadi

**Position**

Associate professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Health Promotion

**Street address**

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**City**

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**Province**

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**Phone**

+98 81 3838 1059

**Fax****Email**

s.shirahmadi@umsha.ac.ir

**Sharing plan****Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

**Study Protocol**

Yes - There is a plan to make this available

**Statistical Analysis Plan**

Yes - There is a plan to make this available

**Informed Consent Form**

Yes - There is a plan to make this available

**Clinical Study Report**

Yes - There is a plan to make this available

**Analytic Code**

Yes - There is a plan to make this available

**Data Dictionary**

Yes - There is a plan to make this available

**Title and more details about the data/document**

All data is potentially shareable after de-identifying individuals

**When the data will become available and for how**

**long**

The access period starts 1 months after the results are published

**To whom data/document is available**

The data will be available only to researchers working in academic and scientific institutions

**Under which criteria data/document could be used**

People who intend to use the study data for review articles and meta-analysis

**From where data/document is obtainable**

Samane Shirahmadi emails

**What processes are involved for a request to access data/document**

After checking the requester's email by Samane Shirahmadi, if the conditions are met, the data will be sent to them 3 days later.

**Comments**