

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

08 Jun 2026

### Phytochemical evaluation and clinical effect of *Syzygium aromaticum* in comparison with the control group on reducing depression in depressive patients: a triple-blind randomized clinical trial

#### Protocol summary

##### Study aim

Comparison of changes in the overall score of the Hamilton Depression Inventory and the change in disease severity score and the overall progress score in the General Clinical Statement Questionnaire in patients with major depressive disorder or bipolar disorder in the depressive episode receiving standard treatment with clove and receiving standard treatment with placebo

##### Design

A randomized clinical trial with a control group, parallel design, triple-blind, phase 3.

##### Settings and conduct

This clinical trial will be performed in Sina Hospital and Imam Khomeini Clinic in Hamadan. Spray containers containing clove essential oil with cans containing cloves will be identified as X and placebo spray containers with cans containing wheat will be identified as Y and will be provided to the physician. The blind mode will be triple-blind.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: A patient aged 16 to 85 years with major depressive disorder or bipolar disorder in the depressive episode; Exclusion criteria: the existence of psychotic symptoms; Anxiety disorders.

##### Intervention groups

Intervention group: 2 months of sertraline + inhalation of a puff of 5% clove essential oil per day + placing the container containing the clove next to the pillow at a certain distance during the night control group: 2 months of sertraline + inhalation of a placebo puff per day + placing the container containing the wheat next to the pillow at a certain distance during the night

##### Main outcome variables

Score items of the Hamilton Depression Inventory score of Severity of illness, and Global improvement of Clinical Global Impression Questionnaire

#### General information

##### Reason for update

Expanding the range of patients due to the lack of patients to conduct the study

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20211223053499N1**  
Registration date: **2022-01-21, 1400/11/01**  
Registration timing: **prospective**

Last update: **2023-03-24, 1402/01/04**

Update count: **1**

##### Registration date

2022-01-21, 1400/11/01

##### Registrant information

##### Name

Sara Javan

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 4629 2601

##### Email address

sarajavan2014@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2022-01-24, 1400/11/04

##### Expected recruitment end date

2022-04-24, 1401/02/04

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

**Trial completion date**

empty

**Scientific title**

Phytochemical evaluation and clinical effect of Syzygium aromaticum in comparison with the control group on reducing depression in depressive patients: a triple-blind randomized clinical trial

**Public title**

The effect of clove in depression

**Purpose**

Treatment

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

Aged 18 to 65 years A patient with major depressive disorder or bipolar disorder in the depressive episode

**Exclusion criteria:**

Existence of psychotic symptoms Cognition disorders Anxiety disorders Schizophrenia Antisocial personality disorder Mental retardation Dementia Pregnancy Lactation Explicit suicidal ideation History of allergy to herbal drugs Having a proven problem with the sense of smell

**Age**

From **18 years** old to **65 years** old

**Gender**

Both

**Phase**

3

**Groups that have been masked**

- Participant
- Care provider
- Investigator
- Outcome assessor
- Data analyser
- Data and Safety Monitoring Board

**Sample size**

Target sample size: **70**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

For this purpose, we will use the balanced block randomization (block size: 4). We prepare four sheets of paper. On the two sheets we write the ((I)) meaning "Intervention" and on the other two sheets we write the ((P)) meaning "Placebo". Mix the sheets together and place them in the table drawer. With the referral of each eligible patient, one of the sheets was randomly pulled out and based on this sheet, I or P was drawn to one of the two groups of intervention (receiving standard treatment with cloves) or control (receiving Standard treatment with placebo). It should be noted that the pulled out sheets will not be returned to the drawer until all four sheets have been pulled out. After randomly pulling out all four sheets, all the sheets are returned to the drawer and the above operation will be continued for the next four patients until the desired sample size (70 patients) is reached.

**Blinding (investigator's opinion)**

Triple blinded

**Blinding description**

Containers containing clove essential oil with dark cans with open lids containing cloves in the form of X and placebo containers with dark cans with open lids containing wheat in the form of Y will be recognized and will be provided to the physician. Only the researcher is aware of the contents of the capsules, the patient's examining physician and the patient himself/herself, will not be aware of any of the contents of the labeled capsules. Therefore, the study design will be triple-blind.

**Placebo**

Used

**Assignment**

Parallel

**Other design features****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Ethics committee of Hamadan University of Medical Sciences

**Street address**

Hamadan University of Medical Sciences, Martyr Fahmideh Street, Hamadan

**City**

Hamadan

**Province**

Hamadan

**Postal code**

6517838678

**Approval date**

2021-12-12, 1400/09/21

**Ethics committee reference number**

IR.UMSHA.REC.1400.715

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

Major depressive disorder, single episode, moderate

**ICD-10 code**

F32.1

**ICD-10 code description**

Major depressive disorder, single episode, moderate

**2****Description of health condition studied**

Major depressive disorder, single episode, mild

**ICD-10 code**

F32.0

**ICD-10 code description**

Major depressive disorder, single episode, mild

### 3

#### **Description of health condition studied**

Major depressive disorder, recurrent, mild

#### **ICD-10 code**

F33.0

#### **ICD-10 code description**

Major depressive disorder, recurrent, mild

### 4

#### **Description of health condition studied**

Major depressive disorder, recurrent, moderate

#### **ICD-10 code**

F33.1

#### **ICD-10 code description**

Major depressive disorder, recurrent, moderate

### 5

#### **Description of health condition studied**

Major depressive disorder, single episode, severe without psychotic features

#### **ICD-10 code**

F32.2

#### **ICD-10 code description**

Major depressive disorder, single episode, severe without psychotic features

### 6

#### **Description of health condition studied**

Major depressive disorder, recurrent severe without psychotic features

#### **ICD-10 code**

F33.2

#### **ICD-10 code description**

Major depressive disorder, recurrent severe without psychotic features

### 7

#### **Description of health condition studied**

Bipolar disorder, current episode depressed, mild or moderate severity

#### **ICD-10 code**

F31.3

#### **ICD-10 code description**

Bipolar disorder, current episode depressed, mild or moderate severity

### 8

#### **Description of health condition studied**

Bipolar disorder, current episode depressed, severe, without psychotic features

#### **ICD-10 code**

F31.4

#### **ICD-10 code description**

Bipolar disorder, current episode depressed, severe, without psychotic features

## **Primary outcomes**

### 1

#### **Description**

Depression rate

#### **Timepoint**

Weeks 0, 4 and 8 after the start of the intervention

#### **Method of measurement**

Hamilton Depression Inventory 17 items and Clinical Global Impression Questionnaire

## **Secondary outcomes**

empty

## **Intervention groups**

### 1

#### **Description**

Intervention group: 2 months of standard treatment (sertraline) + inhalation of one puff per day of 5% clove essential oil (diluted in ethanol) applied to the collar of the shirt + placing the container containing the clove next to the pillow at a certain distance during the night. Merck ethanol. Essential oil prepared in the pharmacognosy laboratory of Hamadan University of Medical Sciences.

#### **Category**

Treatment - Drugs

### 2

#### **Description**

Control group: 2 months of standard treatment (sertraline) + inhalation of a puff per day placebo (ethanol) applied to the collar of the shirt + placing the container containing wheat next to the pillow at a certain distance during the night. Merck ethanol.

#### **Category**

Placebo

## **Recruitment centers**

### 1

#### **Recruitment center**

##### **Name of recruitment center**

Sina Hospital

##### **Full name of responsible person**

Dara Dastan

##### **Street address**

Mirzade Eshghi

##### **City**

Hamadan

##### **Province**

Hamadan

##### **Postal code**

6516848741

##### **Phone**

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dara962@gmail.com

Academic

2

**Recruitment center**

**Name of recruitment center**  
Iman Khomeini clinic  
**Full name of responsible person**  
Dara Dastan  
**Street address**  
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dara962@gmail.com

**Sponsors / Funding sources**

1

**Sponsor**

**Name of organization / entity**  
Hamedan University of Medical Sciences  
**Full name of responsible person**  
دکتر رضا شکوهی  
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Fahmideh  
**City**  
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Hamadan  
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**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**

**Person responsible for general inquiries**

**Contact**

**Name of organization / entity**  
Hamedan University of Medical Sciences  
**Full name of responsible person**  
Sara Javan  
**Position**  
university student  
**Latest degree**  
A Level or less  
**Other areas of specialty/work**  
Medical Pharmacy  
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**Person responsible for scientific inquiries**

**Contact**

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Associate professor  
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**Person responsible for updating data**

**Contact**

**Name of organization / entity**  
Hamedan University of Medical Sciences  
**Full name of responsible person**  
Sara Javan

**Position**

university student

**Latest degree**

A Level or less

**Other areas of specialty/work**

Medical Pharmacy

**Street address**

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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**

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