

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

19 Jun 2026

### The Effect of a Walking Course with the Focus of External Attention on the Balance, Gait and Verbal Memory of Blinds

#### Protocol summary

##### Study aim

Evaluation of the effect of a walking period with the instructions of the external focus on balance, gait and verbal memory of the blind

##### Design

A two-group clinical trial, including a 9-person control group and an experimental 9-person group, one-way blind, was performed by simple random sampling on 18 blind people.

##### Settings and conduct

In the pre-test stage, Wexler static balance, dynamic balance, walking and expansive memory tests were taken. To perform static and dynamic balance test, foot scan device was used to record the pressure center and motion step analysis device was used to take steps.. The Wechsler Width Memory Test was also used to measure participants' short-term memory. Then, 9 people in the experimental group practiced walking for six weeks, three sessions per week and 20 minutes each session along with the instructions of the external focus, and the control group did not follow the purposeful training during this period. All statistical calculations were performed in SPSS software version 21 at a significant level ( $P = 0.05$ ). measurements were performed at the Health Center of Mazandaran University.

##### Participants/Inclusion and exclusion criteria

Age 12 to 16 years, hearing impairment, no history of limb failure in the past year, no other Cognitive developmental disorders and lack of information other mental and physical

##### Intervention groups

1.The control group: 9 blind people without intervention during the study. 2.The experimental group: 9 blind people who intervened during the research

##### Main outcome variables

There was no significant difference between the mean of the center of pressure ( $P=0.0629$ ), a distance of the center of pressure ( $P=0.613$ ), and the range of pressure center in the external internal path ( $P=0.428$ ) and

posterior-anterior path ( $P=0.063$ ). Whereas this exercise period had a significant effect on the verbal memory of the blind ( $P=0.035$ ).

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20201013049014N1**

Registration date: **2020-11-01, 1399/08/11**

Registration timing: **retrospective**

Last update: **2020-11-01, 1399/08/11**

Update count: **0**

##### Registration date

2020-11-01, 1399/08/11

##### Registrant information

##### Name

Fahimeh Hasanzade

##### Name of organization / entity

The University of Semnan

##### Country

Iran (Islamic Republic of)

##### Phone

+98 11 4207 6756

##### Email address

fahimhz15@yahoo.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2019-11-11, 1398/08/20

##### Expected recruitment end date

2019-11-21, 1398/08/30

##### Actual recruitment start date

2019-11-11, 1398/08/20

**Actual recruitment end date**

2019-11-21, 1398/08/30

**Trial completion date**

2020-01-10, 1398/10/20

**Scientific title**

The Effect of a Walking Course with the Focus of External Attention on the Balance, Gait and Verbal Memory of Blinds

**Public title**

The Effect of a Walking Course with the Focus of External Attention on the Balance, Gait and Verbal Memory of Blinds

**Purpose**

Supportive

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

Blind

**Exclusion criteria:****Age**

From **12 years** old to **16 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

- Participant

**Sample size**

Target sample size: **20**

Actual sample size reached: **18**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

First, participants in the study were categorized by gender and age. Each age group (12, 13, 14, 16, 15 years old girls and boys) was given a code in each gender and then the codes were randomly assigned to the control and experimental groups.

**Blinding (investigator's opinion)**

Single blinded

**Blinding description**

Participants in the study were blind people who were kept in daycare centers and entered the study voluntarily by completing the consent form. Subjects were randomly divided into experimental and control groups. The experimental group was told that they would participate in a training session to stay healthy, but they did not know the purpose of the exercises, which was to improve balance performance. However, at the end of the exercises and research, they were given an explanation about the results of the exercises, including changes in balance.

**Placebo**

Not used

**Assignment**

Other

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

empty

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

Research Ethics Committee of Mazandaran University

**Street address**

Mazandaran, Babolsar, University of Mazandaran

**City**

Babolsar

**Province**

Mazandaran

**Postal code**

۱۳۵۳۴-۴۷۴۱۶

**Approval date**

2020-09-15, 1399/06/25

**Ethics committee reference number**

IR.Umz.REC.1399.008

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

Blindness

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

Static balance

**Timepoint**

At the beginning of the study (before the intervention) and 6 weeks after the interventions

**Method of measurement**

Foot scan

**2****Description**

Dynamic balance

**Timepoint**

At the beginning of the study (before the intervention) and 6 weeks after the interventions

**Method of measurement**

Foot scan

**3****Description**

Verbal memory and parrot-like memory assessment

**Timepoint**

At the beginning of the study (before the intervention) and 6 weeks after the interventions

## Method of measurement

Wechsler's Memory

### 4

#### Description

Gait

#### Timepoint

At the beginning of the study (before the intervention) and 6 weeks after the interventions

#### Method of measurement

motion analysis

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: The experimental group performed walking exercises with using headphones and provided rhythmic auditory pulses for 6 weeks, three days a week for each session in the presence of a guide.

#### Category

Behavior

### 2

#### Description

Control group: The experimental group did not perform any exercises.

#### Category

Behavior

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Haj Naser Mahdavi School

##### Full name of responsible person

Akram Aghagolzade

##### Street address

Qaemshahr-Babol road, in front of Telar Hotel, at the beginning of the military road

##### City

Qaemshahr

##### Province

Mazandaran

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##### Phone

+98 11 4229 4031

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Nkh.rama@yahoo.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

The University of Semnan

##### Full name of responsible person

Mojgan Memarmoghdam

##### Street address

In front of Sokan Park - Campus No. 1 - Central Organization of Semnan University

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##### Province

Semnan

##### Postal code

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##### Phone

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##### Email

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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

The University of Semnan

#### 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

The University of Mazandaran

##### Full name of responsible person

Mojggan Memarmoghaddam

##### Position

Consultant

##### Latest degree

Ph.D.

##### Other areas of specialty/work

PhD / Motor Behavior

##### Street address

Mazandaran University - Faculty of Sports Sciences

##### City

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##### Province

Mazandaran

##### Postal code

1353447416

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

The University of Mazandaran

**Full name of responsible person**

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**Latest degree**

Ph.D.

**Other areas of specialty/work**

PhD / Motor Behavior

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

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Fahimeh Hasanzade

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University student

**Latest degree**

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**Other areas of specialty/work**

Motor Behavior-Motor Development

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**Province**

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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