

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

11 Sep 2026

### The effect of 8 weeks of age-specific sport program on some predictive indicators of lower limb injury and performance of taekwondo girls aged 9 to 12 years

#### Protocol summary

##### Study aim

- The aim of this study is to investigate an age-specific training program on some predictive indicators of lower limb injury and performance in girl taekwondo athletes aged 9 to 12 years.

##### Design

A clinical trial with the control group, with parallel groups, randomized

##### Settings and conduct

30 female taekwondo athletes will be randomly assigned to two groups, control and experimental, according to the inclusion and exclusion criteria. Before the intervention begins, tests of Functional and injury prediction tests will be taken from the subjects. The intervention will begin two days after the tests are completed. The intervention includes agility, balance, flexibility, plyometric, and strengthening exercises. Before each exercise, the examiner will first explain the correct execution method to the participants. All measurements and training will be done at the Taekwondo gym and on the tatami.

##### Participants/Inclusion and exclusion criteria

inclusion criteria: Taekwondo girls aged 9 to 12 who have at least one year of sports experience in this field and at least they have a yellow belt. Exclusion criteria : Having an injury in the lower extremities or a history of injury in the past year , having abnormalities in the lower extremities, a history of knee and ankle ligament surgery , fractures of the lumbar-pelvic region and lower limb, a history of neurological and systemic diseases

##### Intervention groups

The intervention group will participate in an age-specific exercise program for 8 weeks with three 15-minute sessions per week, while the control group will not receive any intervention. The intervention will be applied in the form of exercises and will include agility, balance, flexibility, plyometric, and strengthening exercises.

##### Main outcome variables

Agility, performance speed, anaerobic power, dynamic balance, lumbar and pelvic range of motion

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20180626040244N7**

Registration date: **2025-06-25, 1404/04/04**

Registration timing: **prospective**

Last update: **2025-06-25, 1404/04/04**

Update count: **0**

##### Registration date

2025-06-25, 1404/04/04

##### Registrant information

##### Name

Rahman Sheikhhoseini

##### Name of organization / entity

Allameh Tabataba'i University

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 4839 4134

##### Email address

rahmanhoseini@atu.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2025-07-29, 1404/05/07

##### Expected recruitment end date

2025-09-29, 1404/07/07

##### Actual recruitment start date

empty

**Actual recruitment end date**  
empty

**Trial completion date**  
empty

**Scientific title**  
The effect of 8 weeks of age-specific sport program on some predictive indicators of lower limb injury and performance of taekwondo girls aged 9 to 12 years

**Public title**  
The effect of the age-specific program on the predictive indicators of lower limb injury and performance of taekwondo girls.

**Purpose**  
Prevention

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
 Age range: 9 to 12 years old Having at least a yellow belt  
 Gender: Girl Having at least 1 year of experience in Taekwondo  
**Exclusion criteria:**  
 Having an injury in the lower extremities or a history of injury in the past year that has caused the person to stop exercising for a week. Having a clear abnormality in the lower limbs and trunk according to the New York criteria History of knee and ankle ligament surgery or fractures of the lumbar, pelvic, and lower limb areas History of neurological and systemic disease Body pain that worsens with exercise

**Age**  
From **9 years** old to **12 years** old

**Gender**  
Female

**Phase**  
N/A

**Groups that have been masked**  
*No information*

**Sample size**  
Target sample size: **30**

**Randomization (investigator's opinion)**  
Randomized

**Randomization description**  
Randomization will be done as simple method with card. The type of intervention will be put in sealed envelopes (15 cards for each group). Individuals are listed in order of attendance. After including in the study, the envelopes will be shuffled and each person is asked to select an envelope. The subjects will be asked to select one envelope. According to the predicted sample size, the number of envelope will be provided. Therefore, any selected envelope will not be reused for randomization sequence. This type of randomization can result to have the same number of individuals in both groups

**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 Allameh Tabataba'i University

##### Street address

West Azadi sports complex entrance, Hakim highway

##### City

Tehran

##### Province

Tehran

##### Postal code

۱۴۸۵۷۴۳۴۱۱

#### Approval date

2025-05-24, 1404/03/03

#### Ethics committee reference number

IR.ATU.REC.1404.030

## Health conditions studied

### 1

#### Description of health condition studied

Healthy

#### ICD-10 code

Z76.2

#### ICD-10 code description

Encounter for health supervision and care of other healthy infant and child

## Primary outcomes

### 1

#### Description

Agility

#### Timepoint

Before the start of the intervention and two days after the end of the intervention.

#### Method of measurement

Stopwatch

### 2

#### Description

Performance speed

#### Timepoint

Before the start of the intervention and two days after the end of the intervention

#### Method of measurement

Mobile camera

### 3

**Description**

Vertical jump

**Timepoint**

Before the start of the intervention and two days after the end of the intervention

**Method of measurement**

Meter

### 4

**Description**

Dynamic balance

**Timepoint**

Before the start of the intervention and two days after the end of the intervention

**Method of measurement**

Y balance kit

### 5

**Description**

Lumbar-pelvic range of motion

**Timepoint**

Before the start of the intervention and two days after the end of the intervention

**Method of measurement**

Goniometer

### 6

**Description**

Anaerobic power

**Timepoint**

Before the start of the intervention and two days after the end of the intervention

**Method of measurement**

Sargent test

## Secondary outcomes

empty

## Intervention groups

### 1

**Description**

Intervention group: In this group, participants will participate in a special training program in the form of one warm-up for eight weeks. This training program will be done 3 sessions per week. These exercises include agility, balance, flexibility, plyometric and strengthening exercises and are designed according to the level and age of the athletes. These exercises will be performed with available tools such as sports cones, balls and body weight. Each training session will last 15 minutes and will take place in the Taekwondo gym and on tatami. The duration of the intervention will be 24 sessions in an eight-week period.

**Category**

Prevention

### 2

**Description**

Control group: This group will not receive any exercises from the assessor and will continue their daily routine activities.

**Category**

N/A

## Recruitment centers

### 1

**Recruitment center****Name of recruitment center**

Faculty of physical education and sport sciences

**Full name of responsible person**

Rahman Sheikhhoseini

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## Sponsors / Funding sources

### 1

**Sponsor****Name of organization / entity**

Allameh Tabataba'i University

**Full name of responsible person**

Dr Mandana Tishehyar

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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**

Allameh Tabataba'i University

**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**

Allameh Tabataba'i University

**Full name of responsible person**

Rahman Sheikhoseini

**Position**

Associate professor

**Latest degree**

Ph.D.

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Physiotherapy

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**Full name of responsible person**

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**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**

After the article is published, raw data without identifying the participants will be available by email to the corresponding author of the article.

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

After the article is published, raw data without identifying the participants will be available by email to the corresponding author of the article.

**To whom data/document is available**

Any author who needs raw data, with a reason

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

Any researcher can request data.

**From where data/document is obtainable**

By email to the responsible author  
**What processes are involved for a request to access data/document**

By email to the responsible author  
**Comments**