Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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
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Allameh Tabataba'i University
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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 envelops will 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

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Postal code

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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 physiscal educationa and sport scienecs
Full name of responsible person
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Sponsors / Funding sources

1

Sponsor
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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
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Position
Associatet professor

Latest degree
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Other areas of specialty/work
Physiotherapy

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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