Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effect of 8 weeks of dynamic neuromuscular stabilization exercises on some physical and motor fitness indicators in children with spastic hemiplegia cerebral palsy aged 10 to 12 years in Qazvin

Protocol summary

Study aim

The effect of 8 weeks of dynamic neuromuscular stabilization exercises on some physical and motor fitness indicators in children with spastic hemiplegia cerebral palsy aged 10 to 12 years in Qazvin

Design

The clinical trial consisted of an experimental group and a control group, with parallel and random groups. The Random allocation software was used for randomization

Settings and conduct

The present study is a quasi-experimental research with a pre-test-post-test design with an experimental group and a control group. 24 children with spastic hemiplegia cerebral palsy are randomly divided into two experimental and control groups. Physical and motor fitness indices are measured before and after the exercises.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Female gender, age range 10 to 12 years, hemiplegic cerebral palsy, mild to severe spasticity (grade 1+ to grade 3); Inclusion criteria: unwillingness to continue cooperation, absence in two consecutive sessions or three sessions in the entire training period, development of a specific problem that prevents the continuation of the training.

Intervention groups

The intervention group included children with spastic hemiplegia cerebral palsy who received dynamic neuromuscular stabilization intervention. The control group included children with spastic hemiplegia cerebral palsy who did not receive any intervention.

Main outcome variables

Physical and motor fitness indicators including Spasticity, Balance, Walking speed and Range of Motion

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20240221061073N1**
Registration date: **2025-05-13, 1404/02/23**
Registration timing: **prospective**

Last update: **2025-05-13, 1404/02/23**
Update count: **0**

Registration date

2025-05-13, 1404/02/23

Registrant information

Name

somayeh momeni

Name of organization / entity

Payame Noor University

Country

Iran (Islamic Republic of)

Phone

+98 21 4492 7037

Email address

dr.momeni@pnu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2025-06-22, 1404/04/01

Expected recruitment end date

2025-07-23, 1404/05/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title
The effect of 8 weeks of dynamic neuromuscular stabilization exercises on some physical and motor fitness indicators in children with spastic hemiplegia cerebral palsy aged 10 to 12 years in Qazvin

Public title
The effect of dynamic neuromuscular stabilization exercises on some physical and motor fitness indicators in children with spastic hemiplegic cerebral palsy

Purpose
Treatment

Inclusion/Exclusion criteria
Inclusion criteria:
Hemiplegic cerebral palsy Their degree of spasticity ranges from mild to severe (grade 1+ to grade 3)
Exclusion criteria:
Unwillingness to continue cooperation Creating a specific problem that prevents you from continuing to practice

Age
From **10 years** old to **12 years** old

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **24**

Randomization (investigator's opinion)
Randomized

Randomization description
The simple Randomization Method was used to Assign Individuals to two Groups that in this Method It was done by Flip the coin method. This method is usually used to create a random sequence in two-group experiments in such a way that one of the study groups considers the A and the other group the B and based on the sample size, coins were tossed and Individuals are assigned to two random groups. Then, in Order not to Determine Which Group the Individuals will be Assigned to before Dividing them into two Groups, or in other words, Allocation Concealment, the Sequentially numbered, sealed opaque envelopes was used. This method is one of the common methods in concealing random allocation, which is abbreviated to SNOSE method. In this method, after a random sequence, a number of envelopes are prepared and each of the random sequences created is recorded on a card and the cards are placed in the envelopes respectively. In order to maintain a random sequence, the envelopes are numbered in the same way on the outer surface. Finally, the lids of the letter envelopes are glued and placed inside a box, respectively. At the beginning of the registration of participants, according to the order of entry of eligible participants into the study, one of the envelopes of the letter is opened and the assigned group of the participant is revealed.

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
Payam Noor University
Street address
Mini City, Artesh Blvd., Nakhl St., Payam Noor University
City
Tehran
Province
Tehran
Postal code
193954697

Approval date
2023-11-21, 1402/08/30

Ethics committee reference number
IR.PNU.REC.1402.243

Health conditions studied

1

Description of health condition studied
Spastic hemiplegic cerebral palsy

ICD-10 code
G80.2

ICD-10 code description
Spastic hemiplegic cerebral palsy

Primary outcomes

1

Description
Spasticity

Timepoint
At the beginning of the study (before the start of the intervention) and after 8 weeks of intervention

Method of measurement
Ashworth's test

2

Description
Balance

Timepoint
At the beginning of the study (before the start of the intervention) and after 8 weeks of intervention

Method of measurement

Berg balance test

3

Description
Walking speed
Timepoint
At the beginning of the study (before the start of the intervention) and after 8 weeks of intervention
Method of measurement
10 meter walk test

4

Description
Range of Motion
Timepoint
At the beginning of the study (before the start of the intervention) and after 8 weeks of intervention
Method of measurement
Goniometer

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: The intervention group will perform dynamic neuromuscular stabilization exercises. These exercises will be performed for 8 weeks, 3 sessions of 2 hours each week.
Category
Treatment - Other

2

Description
Control group: Without any training and just doing normal daily activities
Category
N/A

Recruitment centers

1

Recruitment center
Name of recruitment center
Care places for cerebral palsy children in Qazvin city
Full name of responsible person
Helya Hadipour
Street address
No. 80, Student Park, Shahid Babaei Street
City
Qazvin
Province
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Postal code
7146617576
Phone
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Email
Behtavan11@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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Somaye Momeni
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Mini City, Artesh Blvd., Nakhl St., Payam Noor University
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dr.momeni@pnu.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
PAYAM NOOR UNIVERSITY
Proportion provided by this source
10
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
Payam noor University
Full name of responsible person
Somayeh Momeni
Position
Assistant professor
Latest degree
Ph.D.
Other areas of specialty/work
Sport injury and corrective exercise
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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
All potential data can be shared after people have not been identified
When the data will become available and for how long
Start the access period one year after printing the results
To whom data/document is available
Data will be available to academic and scientific researchers
Under which criteria data/document could be used
Any kind of functional analysis on the submitted data is allowed
From where data/document is obtainable
by Email: dr.momeni@pnu.ac.ir
What processes are involved for a request to access data/document
by Email: dr.momeni@pnu.ac.ir and the reason for using the documents
Comments