Motor learning in children with DCD

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Ethical review	Approved WMO
Status	Recruiting
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON54882

Source
ToetsingOnline

Brief title
Motor learning in children with DCD

Condition

- Other condition

Synonym
clumsiness, Developmental Coordination Disorder

Health condition

motorische ontwikkeling

Research involving
Human

Sponsors and support

Primary sponsor: Radboud Universiteit Nijmegen
Source(s) of monetary or material Support: Ministerie van OC&W,NWO

Intervention

Keyword: children, DCD, motor learning

Outcome measures

Primary outcome

Main study parameter is the learning rate per person. The learning rates

between the groups will be compared.

Secondary outcome

A validated questionnaire will be given to parents to get a measurement of the

child's capacity to pay attention.

Study description

Background summary

For most children, motor abilities develop naturally. However, a number of children lag behind in their motor development compared to their age-matched peers. A number of these children receives the diagnosis *Developmental Coordination Disorder* (DCD). The diagnostic criteria for DCD are:
- A delay in motor development compared to age-matched peers,
- An impact of this developmental delay on daily activities and/or academic achievements
- Early onset (in infancy) of the motor problems
- Reported problems cannot be better explained by visual, intellectual, or neurological impairments .
Typically, DCD is diagnosed around 6 to 8 years of age. Later diagnosis is possible, but with age, it becomes harder to verify the early onset of the problems.

It is very probable that the motor delay observed in DCD stems from problems in motor learning. However, to date, no reports are known that quantify the motor learning ability of these children in a systematic manner, as this typically is done in research on motor learning in healthy adults, adults with Huntington*s disease, and older adults. The proposed research aims to yield a first quantification and comparison with children without a delay in motor development. The hypothesis is that the motor learning rate is slower for

children with DCD than for age-matched controls.

Study objective

The proposed study aims to quantify motor learning ability in children with DCD and provide a comparison with age-matched controls.

Secondary objective is to provide a tool and to report a protocol of how to quantify motor learning ability in children, including children with DCD.

Study design

The study is observational in nature. We will make use of a between-subjects design, in which we study the difference in motor learning rate between children with DCD and children without such diagnosis.

Study burden and risks

There no known risks associated nor expected with the research protocol. The burden for participating children and their parents will be kept minimal. If there are signs that the child finds the situation unpleasant, then the research will be ended. Likewise, the study can be interrupted or ended upon request of the parent at any moment. Both parent and child will be informed that this is the case.

The current study will include a patient group and minors, as there is no other way to obtain a valid quantification of motor learning rate in the age shortly after diagnosis. The further away in time from the diagnosis, the harder it becomes to pinpoint whether the observed values can be tied to the diagnosis established in childhood

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Children (2-11 years)

Inclusion criteria

Age: between 8.0 and 12.0 years of age
For the patient group: A DCD diagnosis
Normal or corrected-to-normal vision
Right-handed

Exclusion criteria

Known brain damage (holds for both groups)
Known motor disorder (holds only for the control group)

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Other

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	21-12-2022
Enrollment:	40
Type:	Actual

Ethics review

Approved WMO

Date:	08-02-2021
Application type:	First submission
Review commission:	CMO regio Arnhem-Nijmegen (Nijmegen)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL72378.091.20