Increasing motor skills and physical activity in children with Developmental Coordination Disorder: a controlled trial.

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To investigate the short-term and long-term effects of a 12-week motor skills intervention, including behavioural motivation techniques, on motor skills, physical activity, perceived motor competence and global self-worth in children with DCD.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Interventional

Summary

ID

NL-OMON40172

Source
ToetsingOnline

Brief title
Motor skills and physical activity in children with DCD

Condition

- Other condition

Synonym
Developmental Coordination Disorder, motor skills disorder

Health condition

motorische retardatie

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Utrecht
Source(s) of monetary or material Support: Vormingsfonds Oefentherapie Cesar

Intervention

Keyword: DCD, motor skills, perceived motor competence, physical activity

Outcome measures

Primary outcome

The main study parameters are:

- physical activity as assessed with a pedometer and parental proxi-reports

Secondary outcome

Secondary parameters are:

- motor skills as assessed with the MABC-II and the Developmental Coordination

Disorder Questionnaire 2007 (DCDQ 2007)

- perceived motor competence as assessed with the *Hoe ik

vind dat ik het doe* - questionnaire

- global self-worth as assessed with the Self Perception Profile for Children

Study description

Background summary

Children with Developmental Coordination Disorder (DCD) experience difficulties in participation in daily life that require motor skills. Evidence suggests task-oriented motor interventions to be beneficial for improving motor skills in children with DCD. However, whether the newly learned motor skills lead to an increase in the amount of physical activities has not been investigated yet. Secondly, children with DCD are shown to have a lower perceived motor competence compared to typically developing children, which in turn, is a significant predictor of physical activity in children. Therefore, motor interventions that (also) aim to increase perceived motor competence might

potentially be beneficial to improve both motor skills and physical activity in children with DCD. Studies investigating a possible additional benefit of focussing on a child*s perceived competence are currently lacking.

Study objective

To investigate the short-term and long-term effects of a 12-week motor skills intervention, including behavioural motivation techniques, on motor skills, physical activity, perceived motor competence and global self-worth in children with DCD.

Study design

The study is a Clinical Controlled Trial (CCT). Assessors and paediatric therapists that administer therapy as usual to the control group will be blinded for treatment allocation.

Intervention

Children in the intervention group will receive twelve individual-tailored treatment sessions of 30 minutes once a week. Treatment goals will be set for each child individually based upon structured assessment of the child*s motor skills and perceived motor competence. A variety of functional tasks and gross motor play activities will be given to enhance motor skills. During intervention sessions, behavioural motivation techniques will be used in order to enhance children*s perceived motor competence and physical activity. All participating therapists will receive special training before intervention. Children in the control group will receive care as usual for twelve treatment sessions of 30 minutes once a week.

Study burden and risks

Extent of the burden: the patients in the intervention group and control group have to participate in a tailored intervention program once a week, 30 minutes per treatment session for 12 treatment sessions. A variety of functional tasks and playful exercises will be given to enhance motor skills. During intervention sessions behavioural motivation techniques will be used. Furthermore, the above mentioned tests will be administered at 3 time points.
Risks: from the existing literature motor interventions are safe in children with DCD, no accidents or negative side-effects have been reported.
Benefit: evidence from studies of task-oriented motor interventions suggests a positive effect on motor skills in children with DCD. It is hypothesized that an individual tailored motor intervention program that uses additional behavioural motivation techniques will increase motor skills, physical activity, perceived motor competence and global self-worth in children with

DCD.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Children (2-11 years)

Inclusion criteria

-Children referred to paediatric therapy by a general practitioner or school medical officer;
-Score on a standardised test of motor skills performance (MABC-II) below 16th percentile;
-An indication of DCD or suspected DCD on the Developmental Coordination Disorder Questionnaire 2007 as experienced by parents;
-A score below the advised amount of daily steps for children (boys < 15000; girls < 12000) on a pedometer (Yamax CW700);
-Age between 7 and 10;
-Parental informed consent and child verbal assent;
-No known neurological disorders causing motor problems (e.g. cerebral palsy, spina bifida etc.).

Exclusion criteria

-Insufficient understanding of the Dutch language;
-Children with only a low score (< 16th percentile) on the subscale manual dexterity of the MABC-II.

Study design

Design

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	14-11-2013
Enrollment:	48
Type:	Actual

Ethics review

Approved WMO Date:	23-07-2013
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)
Approved WMO Date:	01-07-2014
Application type:	Amendment
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)
Approved WMO	

Date:	14-01-2015
Application type:	Amendment
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)
Approved WMO Date:	04-02-2015
Application type:	Amendment
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)

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	NL43890.041.13