

# Robotic toys within occupational therapy for children with developmental disabilities.

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**Objective:** This study has as its aim to examine the short-term effect of a robotic-facilitated play therapy within occupational therapy on the level of playfulness of children with developmental disabilities aged 2-16 years.

<b>Ethical review</b>	Approved WMO
<b>Status</b>	Recruitment stopped
<b>Health condition type</b>	Neurological disorders congenital
<b>Study type</b>	Interventional

## Summary

### ID

NL-OMON32682

### Source

ToetsingOnline

### Brief title

robot assisted play

### Condition

- Neurological disorders congenital
- Mental impairment disorders
- Developmental disorders NEC

### Synonym

developmental disability, intellectual disability

### Research involving

Human

### Sponsors and support

**Primary sponsor:** Hogeschool Zuyd, Kenniskring technologie in de zorg

**Source(s) of monetary or material Support:** Ministerie van OC&W, aanvraag.nl (NRF / Johanna Kinderfonds in aanvraag)

## Intervention

**Keyword:** developmental disabilities, occupational therapy, playfulness, robotic toy

## Outcome measures

### Primary outcome

Playfulness (Bundy, 2005; Bundy et al. 2009)

Data gathering will be done from three different view points. Video-observation will offer the method for scoring each participant on the Test of Playfulness (4.0 Bundy 2005) and the IROMEC evaluation questionnaire (2009 not published now). Additionally, the child's perspective and the view point of the involved occupational therapists will be assessed.

### Secondary outcome

not applicable

## Study description

### Background summary

Research tends to show a reduced playfulness in children with developmental disabilities. A high level of playfulness leads to engagement in play. Participation in children's most important occupation, which is play, contributes health and well-being. New interventions that can foster the level of playfulness for this target group in occupational therapy need to be tested. It is expected that the introduction of a robot facilitated play in occupational therapy will have a favourable influence on the level of playfulness of children with developmental disabilities aged 2-16 years for the duration of the research period.

The robotic toy chosen for the investigation was developed within the European

project IROMEC, a three year project started in November 2006, co-funded by the European Commission within the RTD activities of the Strategic Objectives SO 2.61 \*Advanced Robotics\* of the 6th Framework Programme. The IROMEC robot is a modular and configurable robotic platform that can be used in therapy and education. It was specially developed for children with Autistic Spectrum Disorder, severe motor impaired children and children with intellectual disabilities. The appearance of the robotic toy is a mix of humanoid and vehicle like, depending on the horizontal or vertical position.

## **Study objective**

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## **Study design**

The study will be based on a single-subject time series approach belonging to the quasi-experimental designs.

## **Intervention**

Two different interventions will be conducted by the responsible occupational therapists: playing playscenario's with the IROMEC robot and playing with normal toys during occupational therapy intervention.

## **Study burden and risks**

negligible

## **Contacts**

### **Public**

Selecteer

Nieuw Eyckholt 300  
Postbus 550, 6400 AN Heerlen  
Nederland

### **Scientific**

Selecteer

Nieuw Eyckholt 300  
Postbus 550, 6400 AN Heerlen  
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## Trial sites

### Listed location countries

Netherlands

## Eligibility criteria

### Age

Adolescents (12-15 years)

Adolescents (16-17 years)

Children (2-11 years)

### Inclusion criteria

Child with primary diagnosis of developmental disability, age 2 - 16 years

### Exclusion criteria

presence of sensory impairments (deafness and blindness) or severe motor impairments

## Study design

### Design

**Study type:** Interventional

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Treatment

### Recruitment

NL

Recruitment status: Recruitment stopped

Start date (anticipated): 03-05-2010

Enrollment: 3

Type: Actual

## Ethics review

Approved WMO

Date: 15-12-2009

Application type: First submission

Review commission: METC Z: Zuyderland-Zuyd (Heerlen)

## 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	NL29944.096.09