Wii-habilitation of arm and hand Function in Children with Cerebral Palsy, an explorative study.

No registrations found.

Ethical review	Not applicable
Status	Pending
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON28638

Source NTR

Brief title WiiCP

Health condition

Limited upper extremityfunction in children with Cerebral Palsy

Sponsors and support

Primary sponsor: Rietman H., Roessingh Research and Development Roessinghsbleekweg
33b 7522 AH Enschede The Netherlands,
Source(s) of monetary or material Support: sponsor

Intervention

Outcome measures

Primary outcome

1. The Assisting Hand Assessment;

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- 2. Melbourne Assessment;
- 3. ABILHAND- Kids.

Secondary outcome

- 1. User Satisfaction Questionnaire;
- 2. Health professional usability questionnaire.

Study description

Background summary

Rationale:

Impaired upper extremity function is the main problem for half of the children diagnosed with Cerebral Palsy with unilateral hemiparese and contributes significantly to difficulties in performing activities of daily living. Typical therapy uses purposeful activity and task-specific training to improve motor function and independence. There are several potential advantages of Virtual reality (VR) en exercise gaming for rehabilitation. VR facilitates real time performance feedback, safety, independent training, a capacity to increase the complexity of tasks, and it can record advantages. The most import and strength to therapy is the ability of VR to provide a motivational and fun therapy.

Objectives:

The primary objective of this explorative study is to evaluate the training effect on the upper extremity function in children with Cerebral Palsy using the Wii computer, which is a Virtual Reality intervention. The secondary objective is to evaluate the user satisfaction and usability of WiiTM computer training for the user and the health professional.

Design:

In this explorative study, a multiple baseline design is used to examine individual changes in arm function after training with a WiiTM computer. This study consists of two pre- and one post training primairy outcome measurements of functional aspects of upper extremity movements. The Children will attend 12, half an hour, sessions in total. 2 times a week for 6 Weeks. After the intervention the secondary outcome measurements will be obtained.

Study population:

Ten children with spastic cerebral palsy will participate in the study. They will be recruited from the regional rehabilitation centre "Het Roessingh" (Enschede, The Netherlands), where children with physical disabilities are treated during school-time.

Endpoints:

Primary endpoints: The Assisting Hand Assessment; Melbourne Assessment; ABILHAND- Kids.

Secondary endpoints: User Satisfaction Questionnaire; Health professional usability questionnaire.

Study objective

The primary objective of this explorative study is to evaluate the training effect on the upper extremity function in children with Cerebral Palsy using the Wii computer, which is a Virtual Reality intervention.

The secondary objective is to evaluate the user satisfaction and usability of WiiTM computer training for the user and the health professional.

Study design

- 1. Basiline = primary outcome measurements;
- 2. Two weeks no training;
- 3. T1= primary outcome measurements;
- 4. 6 weeks intervention;
- 5. T2 = primary outcome measurements + secundary outcome measurements.

Intervention

30 minute with Wii exercise games 2 times a week for 6 weeks.

Contacts

Public

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Eligibility criteria

Inclusion criteria

- 1. Ages between 6 and 12 years;
- 2. Have impairment of the upper extremity primarily or secondary to cerebral palsy;
- 3. Have the ability to hold on to the game controller;
- 4. Are able to stretch actively and bend shoulder and elbow of the affected arm;
- 5. Improvement of upper extremity function is a current goal for rehabilitation;
- 6. Have normal or corrected to normal vision and hearing.

Discriptive caracteristics:

- 1. Gender;
- 2. Age;
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- 3. Rehabilitation diagnosis;
- 4. Affected side;
- 5. Dominant side;
- 6. CP classification according to the Gross Motor Function Classification System (GMFCS) (6);
- 7. CP classification according to the Manual Ability Classification Scale (MACS)(7);
- 8. Zancolli classification for the fingers and wrist (16);
- 9. House classification for thumb deformities (17);
- 10. Current treatments for upper extremity function;
- 11. Current treatments;
- 12. Previous experience with VR, WiiTM computer games and computer games in general.

Exclusion criteria

1. Epilepsy not under control with medication;

2. Impairment of the upper extremity due to other causes then primarily or secondary to cerebral palsy;

3. Unable to understand instructions for using the intervention.

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Non controlled trial
Masking:	Open (masking not used)
Control:	N/A , unknown

Recruitment

NL	
Recruitment status:	Pending
Start date (anticipated):	26-02-2010
Enrollment:	10
Type:	Anticipated

Ethics review

Not applicable Application type:

Not applicable

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
NTR-new	NL2059
NTR-old	NTR2176
Other	CCMO : 30777
ISRCTN	ISRCTN wordt niet meer aangevraagd.

Study results

Summary results

N/A