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Limbs Alive: Use of video games to provide motivating, child centred therapy to improve bimanual skills for children with hemiplegic cerebral palsy

Submission date
28/11/2012

Recruitment status
No longer recruiting

Registration date
29/11/2012

Overall study status
Completed

Last Edited
25/11/2019

Condition category
Nervous System Diseases

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

Contact name
Prof Janet Eyre

Contact details
Sir James Spence Institute4th Floor
Queen Victoria Road
Newcastle upon Tyne
United Kingdom
NE1 4LP
+44 191 282 1386
j.a.eyre@ncl.ac.uk

Additional identifiers

Protocol serial number
11138

Study information

Scientific Title
Limbs Alive: Use of video games to provide motivating, child centred therapy to improve bimanual skills for children with hemiplegic cerebral palsy

Study objectives
The aim of this study is to find out whether bespoke video games can improve bimanual function in children with hemiplegic cerebral palsy.

Ethics approval required
Old ethics approval format

Ethics approval(s)
21/04/2011, ref: 11-NE-0027

Study design
Randomised interventional trial

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Hemiplegic cerebral palsy

Interventions
70 children with hemiplegia will be randomly allocated to intervention or placebo groups, stratified for sex and severity. The children and families will be told only that computer games are being evaluated for therapy. The research team will be blinded to group allocation. Both groups will be given the same computer games. Intervention group: successful playing will require increasing bimanual dexterity. Placebo group: increasing skill will be required of only the non-affected hand. The date, time, duration of play and score will be recorded automatically.

The Intervention Group The initial grade of difficulty of the task for the paretic hand will be set to make use of their maximum skill. Bimanual dexterity will be required and the task difficulties will be interactively adjusted as part of the game to take account of increasing skill in bimanual hand use.

Clinical assessments of upper limb function will be carried out at baseline, 1, 3 and 6 months by an experienced therapist.

Intervention Type
Other

Phase
Not Applicable

Primary outcome(s)
Melbourne Unilateral Upper Limb Assessment at 1 month, 3 months and 6 months

Key secondary outcome(s))
1. Assisting Hand Assessment at 1 month, 3months and 6 months
2. Beery-Buktenica Developmental Test of Visual-Motor Integration at 1 month, 3 months and 6 months
3. Canadian Occupational Performance Measure at 1 month, 3months and 6 months
4. Kidscreen at 1 month and 6 months

Completion date
30/12/2012

Eligibility

Key inclusion criteria
1. Hemiplegic cerebral palsy
2. Able to actively grasp the game controller with the paretic hand, though grasp need not be maintained.
3. Male & Female, age 7-15 years

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Child

Lower age limit
7 years

Upper age limit
15 years

Sex
All

Key exclusion criteria
1. IQ less than 70
2. Severe behavioural problems
3. Severe visual impairment
4. Severe fixed contractures of the wrist or elbow
5. Epilepsy induced by the flicker frequency of a computer screen

Date of first enrolment
01/04/2012

Date of final enrolment
30/12/2012

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Sir James Spence Institute
4th Floor
Newcastle upon Tyne
United Kingdom
NE1 4LP

Sponsor information

Organisation
Newcastle upon Tyne Hospitals NHS Foundation Trust (UK)

ROR
https://ror.org/05p40t847

Funder(s)

Funder type
Government

Funder Name
National Institute for Health Research (NIHR) (UK) - Research for Patient Benefit (RfPB)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration