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Can young visual impaired children learn to handle a magnifier?

Submission date	Recruitment status	[_] Prospectively registered
04/04/2006	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
04/04/2006	Completed	[X] Results
Last Edited	**Condition category**	[_] Individual participant data
08/04/2021	Eye Diseases	

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
N/A

Study information

Scientific Title
Can young visual impaired children learn to handle a magnifier?

Study objectives

When young visual impaired children can participate in a training (game) in which a magnifier is used, they learn to handle the magnifier (fine motor skills), they learn to observe small symbols (visual behaviour) and they become interested in the world of small things and know how to visualize these things.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Ethics approval received from the local medical ethics committee

Study design
Randomised controlled trial

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Visual impairment

Interventions
The experimental group trains with a magnifier. The control group trains without a magnifier. The training (game) is the intervention. It is given twice a week (20 minutes) for 6 weeks.

The material consists of eight different patterns, each with four pathways made out of small symbols (LH), somewhat like 'ant trails'. The pathways either go horizontal, vertical or round, and they can cross each other. By following the paths with the magnifier, movements are induced in all directions. The goal of the task is to find the symbol at the end of the pathway corresponding to the symbol at the start. The size of the symbols is adjusted to each individual child's visual acuity.

Intervention Type
Other

Phase
Not Specified

Primary outcome(s)
1. Can the training teach children to handle a magnifier?
2. Can we find a difference in performance after the training (in motor skills, symbol discrimination, visual behaviour)?

Preliminary analysis (updated 15/11/2006):
Preliminary analysis revealed that the 12-session training had a positive influence on childrens performance on the task. The number of correctly found end-points, attained by adequately following the corresponding path, increased for both training groups. There was however a difference in the amount of increase between the two groups.

On average, the group that has trained without the magnifier performed twice as good. That is, in the post-test they found twice as much correct end-point figures as compared to the pre-test. In the group that has trained with the magnifier, this number was four times as high. Now we are studying the rich data we collected to uncover the relevant variables that determine childrens progression and the differences between the groups. In addition we are looking for a possible transfer of this progression to other domains of their development (e.g., fine-motor skills).

Key secondary outcome(s))
1. How do young visual-impaired children work with a visual aid?
2. Can they perform the complex task of training and magnifier, and do they have a dominant hand and dominant eye?

Completion date
01/09/2006

Eligibility

Key inclusion criteria
1. Children, aged 2.5 to 6 years old, with visual impairment: visual acuity 0.3 or less. All children have normal development
2. Children included will have an ophthalmologic examination, an examination of their gross and fine motor skills, and an examination of their overall level of development

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Child

Lower age limit
2.5 years

Upper age limit
6 years

Sex
All

Total final enrolment
33

Key exclusion criteria
1. Developmental delay
2. Impairment of motor skills
3. Prematurity

Date of first enrolment

01/02/2006

Date of final enrolment
01/09/2006

Locations

Countries of recruitment
Netherlands

Study participating centre
Bartiméus
Zeist
Netherlands
3700 BA

Sponsor information

Organisation
Bartiméus (The Netherlands)

ROR
https://ror.org/047b7k736

Funder(s)

Funder type
Research organisation

Funder Name
Netherlands Organisation for Health Research and Development (ZonMw), Stichting Oogfonds Nederland

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		01/06/2009	08/04/2021	Yes	No