

Wobble - Het Wiebelkinderen Onderzoek naar Betere Breinprestaties en LeerEffecten

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1. Using a wobble cushion and tangle will lead to improved performance on a math test, reading comprehension test and on a sustained attention test for children with more problems with sensory information processing (both low and high threshold) in...

Ethische beoordeling	Positief advies
Status	Werving nog niet gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON20331

Bron

NTR

Verkorte titel

WOBBLE

Aandoening

Sensory information processing - sensorische informatie verwerking

Ondersteuning

Primaire sponsor: Open Universiteit

Overige ondersteuning: NRO

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Performance on math test, reading comprehension test, and sustained attention test (Bourdon-Vos).

Score on Sensory Profile

Toelichting onderzoek

Achtergrond van het onderzoek

WOBBLE NTR

In every classroom there are children who have trouble with focusing. This can be detrimental for their school performance, as they do not absorb the information which is being thought, or because they cannot focus on a test (long enough). These children are sometimes (mis)diagnosed (with for example AD(H)D, autism spectrum disorder or learning disorder), while their suboptimal focus could be caused by the manner in which they process sensory information. Every individual processes sensory stimuli in a different way. A sensory stimulus needs to achieve a certain threshold to be noticed. This threshold differs per individual. Some individuals have a high threshold (they are slow to notice a stimulus), other have a low threshold (they notice stimuli quickly). An individual can regulate the threshold by adding stimuli (e.g. wobbling) or shielding of stimuli (e.g. putting hands on ears). Individuals who do not regulate their threshold can possibly miss out on stimuli (a child that is staring out of the window) or become overstimulated. The neurological threshold (low/high) and regulation (active/passive) leads to four sensory information processing patterns: low registration (high/passive), sensory sensitivity (low/passive), sensation seeking (high/active), sensory avoiding (low/active).

Children with sensory information processing problems sometimes get aids such as a tangle, wobble cushion or noise-reducing headphones which are thought to help with sensory information processing regulation. Whether these aids actually work has never been scientifically studied. Goal of the current study is to empirically investigate whether (a) these aids are helpful in the regulation of sensory information processing during a math test, a comprehensive reading test and a sustained attention test and (b) which aid is most helpful for each sensory information processing pattern.

To investigate this 250 students attending second grade (groep 4) will be recruited. Parents will be informed via an information letter and they are asked to return a filled out informed consent to school. The parents whose children are allowed to participate in the study are asked to fill out the Sensory Profile-NL (Dunn, W., SP-NL | Sensory Profile-NL - herziene editie. 2013: Pearson), this questionnaire is designed to assess the sensory information processing abilities of children. Parents answer questions about the regularity (almost never – almost always) with which their child acts on a sensory event as described in the item. The questionnaire gives scores on four sensory processing profiles: low registration, sensation seeking, sensory avoiding and sensory sensitivity.

Next, the experiment will be executed at the school; the students will execute a math test, a

reading comprehension test and a sustained attention test. This will be repeated four times, while they use a different aid (wobble cushion, tangle or headphones) or nothing (control condition) every session. This allows us to determine the direct effect of the aids in comparison to each other and in comparison to the control condition in an ecological valid setting, namely the classroom. There will be randomization of the aids over the conditions and tests.

To analyze results mixed design repeated measure ANOVAs will be executed, separate ANOVAs for the math test, reading comprehension test and attention test. The scores on the tests during the conditions (wobble cushion, tangle, head phone and control) are the repeated measures (within subjects factors) and the behavior related to the patterns of sensory processing within a child are the between subject factors. Additionally ANOVAs will be executed to determine interactions between condition and behavior severity within a sensory profile that emerge within the repeated measures ANOVAs.

Doel van het onderzoek

1. Using a wobble cushion and tangle will lead to improved performance on a math test, reading comprehension test and on a sustained attention test for children with more problems with sensory information processing (both low and high threshold) in comparison to not using an aid.
2. Using noise-reducing headphones will lead to improved performance on a math test, reading comprehension test and on a sustained attention test for children with more problems with sensory information processing with a low threshold in comparison to not using an aid.
- 3 The use of aids by children without sensory information processing problems will not lead to improved performance on a math test, reading comprehension test and on a sustained attention test in comparison to not using an aid.

Onderzoeksopzet

Children will perform the math test, reading comprehension test and sustained attention test in 4 test sessions (1 per week, 4 weeks in a row) every time with a different aid (or nothing as the control condition)

Onderzoeksproduct en/of interventie

Wobble cushion - tangle - noise-reducing headphones

Contactpersonen

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

All children in class 4 (groep 4) at participating schools can participate.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

None

Onderzoeksopzet

Opzet

Type: Interventie onderzoek

Onderzoeksmodel:	Factorieel
Toewijzing:	Gerandomiseerd
Blinding:	Open / niet geblindeerd
Controle:	N.v.t. / onbekend

Deelname

Nederland	
Status:	Werving nog niet gestart
(Verwachte) startdatum:	01-10-2018
Aantal proefpersonen:	216
Type:	Verwachte startdatum

Ethische beoordeling

Positief advies	
Datum:	30-08-2018
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL7246
NTR-old	NTR7453
Ander register	: NTR 405-18-644

Resultaten

Samenvatting resultaten

NA