

N.M. Siebelink^{1,2}, J. K. Buitelaar^{1,2}, S. M. Bögels³, A. E. M. Speckens⁴, C.U. Greven^{1,2,5}

¹Radboud University Medical Centre, Donders Institute for Brain, Cognition and Behaviour, Department of Cognitive Neuroscience, The Netherlands; ²Karakter Child and Adolescent Psychiatry University Center, The Netherlands; ³University of Amsterdam, Academic Treatment Centre for Parents and Children UvA Minds, The Netherlands; ⁴Radboud University Medical Centre for Mindfulness, The Netherlands; ⁵King's College London, MRC Social, Genetic and Developmental Psychiatry, Institute of Psychiatry, Psychology and Neuroscience, UK.

Background

- Attention-deficit/ hyperactivity disorder (ADHD) is a common neurodevelopmental disorder affecting 6% of youth [1].
- Existing interventions for ADHD all have shortcomings, as they have limited effects on improving self-control deficits in ADHD, and residual symptoms and impairment remain [2-5].
- We propose mindfulness as innovative non-pharmacological intervention to target these shortcomings.
- Mindfulness is defined as paying attention to the present moment, on purpose and without judgment [6, 7].
- Pilot studies with children with ADHD without comorbid autism spectrum disorder (ASD) show promising effects following mindfulness training, in terms of improvements in self-control and reduction in ADHD symptoms [8-10]. However, it is unclear if mindfulness training is feasible also for children with more severe ADHD and/or comorbid ASD.

Objective

We aim to examine the feasibility of a mindfulness training for children with ADHD in a psychiatric centre specialised in complex child psychiatry.

Methods

- MYmind training (Bögels, 2016): We used the MYmind mindfulness training, which is based on Mindfulness-Based Cognitive Therapy (MBCT), adapted for families with ADHD (e.g. shorter meditations). The training exists of mindfulness training for the children, and parallel mindful parenting for the parents. There are 8 weekly group sessions of 1,5 hours. Sessions for parents and children are mostly separate, some are together.
- The sessions were given in the evening when the medication effects had disappeared.
- Teachers: The training was offered by two experienced and qualified mindfulness teachers and a co-teacher, all certified in delivering MYmind training.
- Assessments: Satisfaction and subjective effects were assessed using self-report questionnaires at post-test and 2 parents were interviewed for qualitative data.

Participants

- 8 children (5 boys and 3 girls) aged 8-14 years and 11 parents (4 men and 7 women) aged 32-54 years participated.
- All children were diagnosed with ADHD, and 3 with comorbid ASD.
- ADHD medication was used by 5 children.

Quote from parent of child with ADHD in the pilot training:

"I was delighted to go, always. We lead a busy life. Filled with work, our private life, the nurture and care for our daughter. It always made us running and racing to get to the mindfulness sessions on time, but we always went. I looked forward to it. To listen quietly, and also finding the peace and calm. One could also sense that people were opening up during these meetings. Emotions came free. I felt after practicing mindfulness: I can cope again, I am revitalised."



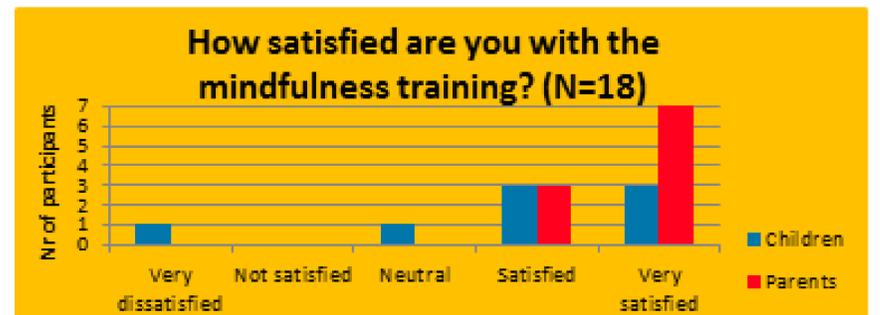
References: 1.Willcutt, E.G., *Neurotherapeutics*, 2012. 9(3): p. 490-9. 2.Van der Oord, S., *Clin Psychol Rev*, 2008. 28(5): p. 783-800. 3.Daley, D., *J Am Acad Child Adolesc Psychiatry*, 2014. 53(8): p. 835-47, 847.e1-5. 4.Rappaport, M.D., *Clin Psychol Rev*, 2013. 33(8): p. 1237-52. 5.Sharpe, K., *Nature*, 2014. 506(7487): p. 146-8. 6.Kabat-Zinn, J., 1990, New York, N.Y.: Delacorte Press. 7.Baer, R.A., *Clin Psychol-Sci Pr*, 2003. 10(2): p. 125-143. 8.van der Oord, S., *J Child Fam Stud*, 2012. 21(1): p. 139-147. 9.van de Weijer-Bergsma, E., *J Child Fam Stud*, 2012. 21(5): p. 775-787. 10.Bögels, S., *Behav Cogn Psychoth*, 2008. 36(2): p. 193-209.

Conflict of interest: Siebelink, Buitelaar, Speckens and Greven have no conflicts of interest. Bögels is providing training to professionals to become certified MYmind teachers which could be construed as a potential conflict of interest.

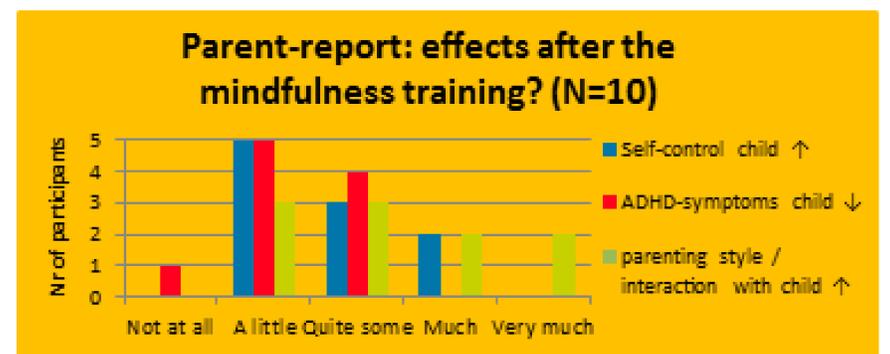
Funding sources: This study was supported by a Horizon 2020 grant (grant agreement 643051, MiND).

Results

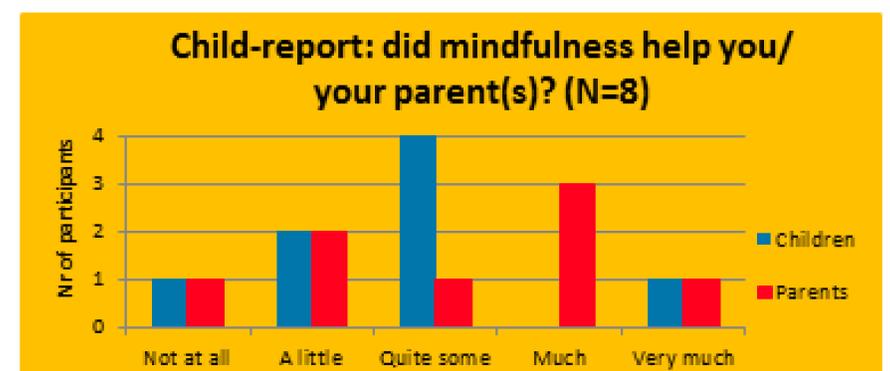
- All participants finished the training (no drop-outs), and attendance rate of sessions was on average 95% and 92% for children and their parents, respectively.
- Satisfaction varied from very dissatisfied (N=1 child, reason: boring) to very satisfied



- Parents reported a little (N=5) to much (N=2) increase of child self-control, not at all (N=1) to quite some (N=4) decrease of child ADHD-symptoms and a little (N=3) to very much (N=2) improvement of parenting style or parent-child interaction.



- Children's reports on the helpfulness of the training were diverse, with a tendency to view the training as more helpful for their parents rather than for themselves.



Conclusion

- MYmind training, is feasible for children from the age of 8 with severe ADHD and/or comorbid ASD.
- Attendance rates are high and satisfaction good.
- Parents report improvements in child self-control, ADHD symptoms and parent-child interaction following mindfulness training.
- Children report that the training helps their parents slightly more than themselves.

Outlook

Having demonstrated the feasibility of the MYmind training in this population, and based on previous evidence in less severe ADHD [8-10], we are now extending this pilot to conduct a randomised-controlled trial (N=100 children aged 8-16 and their parents) comparing the MYmind training with care-as-usual: the MindChamp-study (Mindfulness for Children with ADHD and Mindful Parenting).



Contact
mindchamp@karakter.com