

# Behavioural interventions for ADHD.

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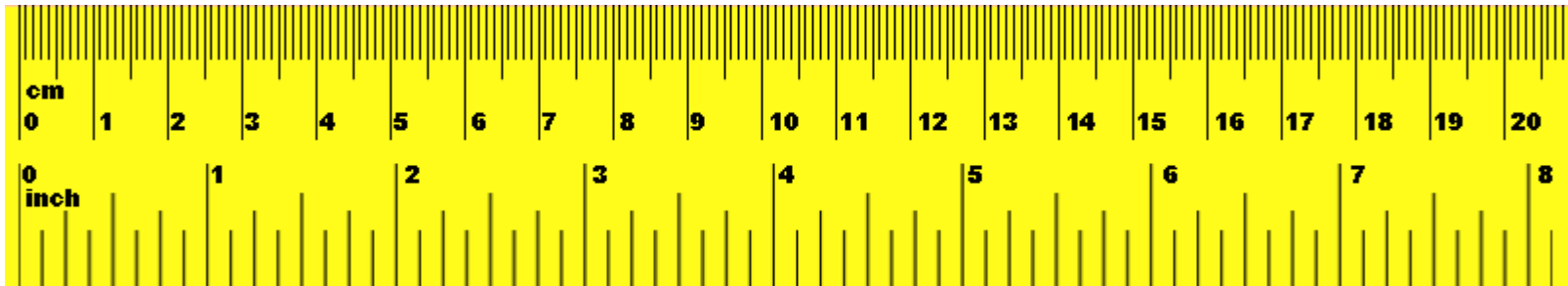
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# Meta-analysis of non-pharmacological interventions for ADHD

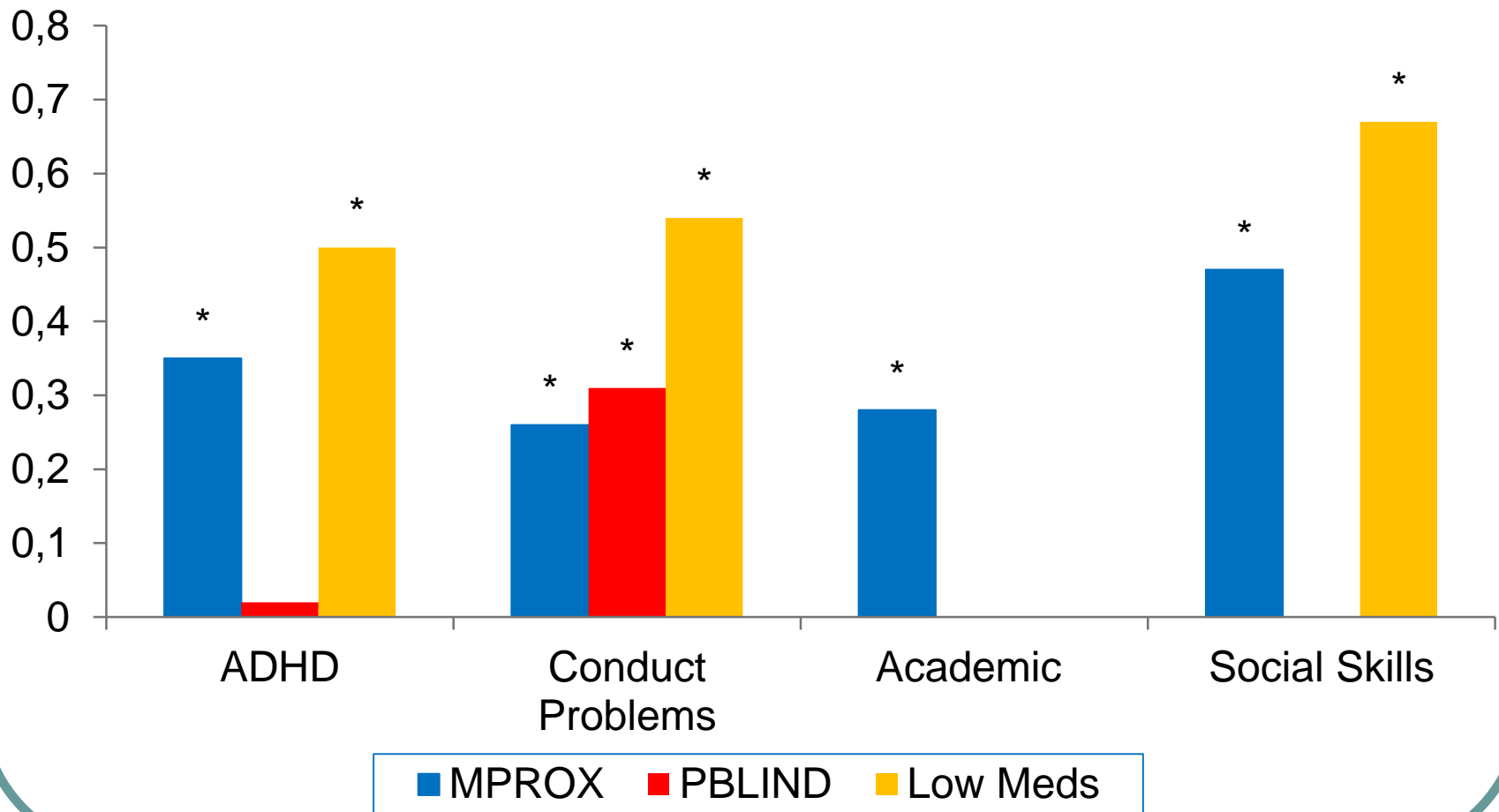
- Daley, Van der Oord, Ferrin, Danckaerts, Doepfner, Cortese & European ADHD Guidelines Group (2014) meta-analysis on non-pharmacological interventions for ADHD
- The analysis on children aged 3 - 18 focused on two key informants
- i) **MPROX** Person most proximal to the delivery of treatment
- ii) **PBLIND** Person most probably blind

# The Ritalin Ruler

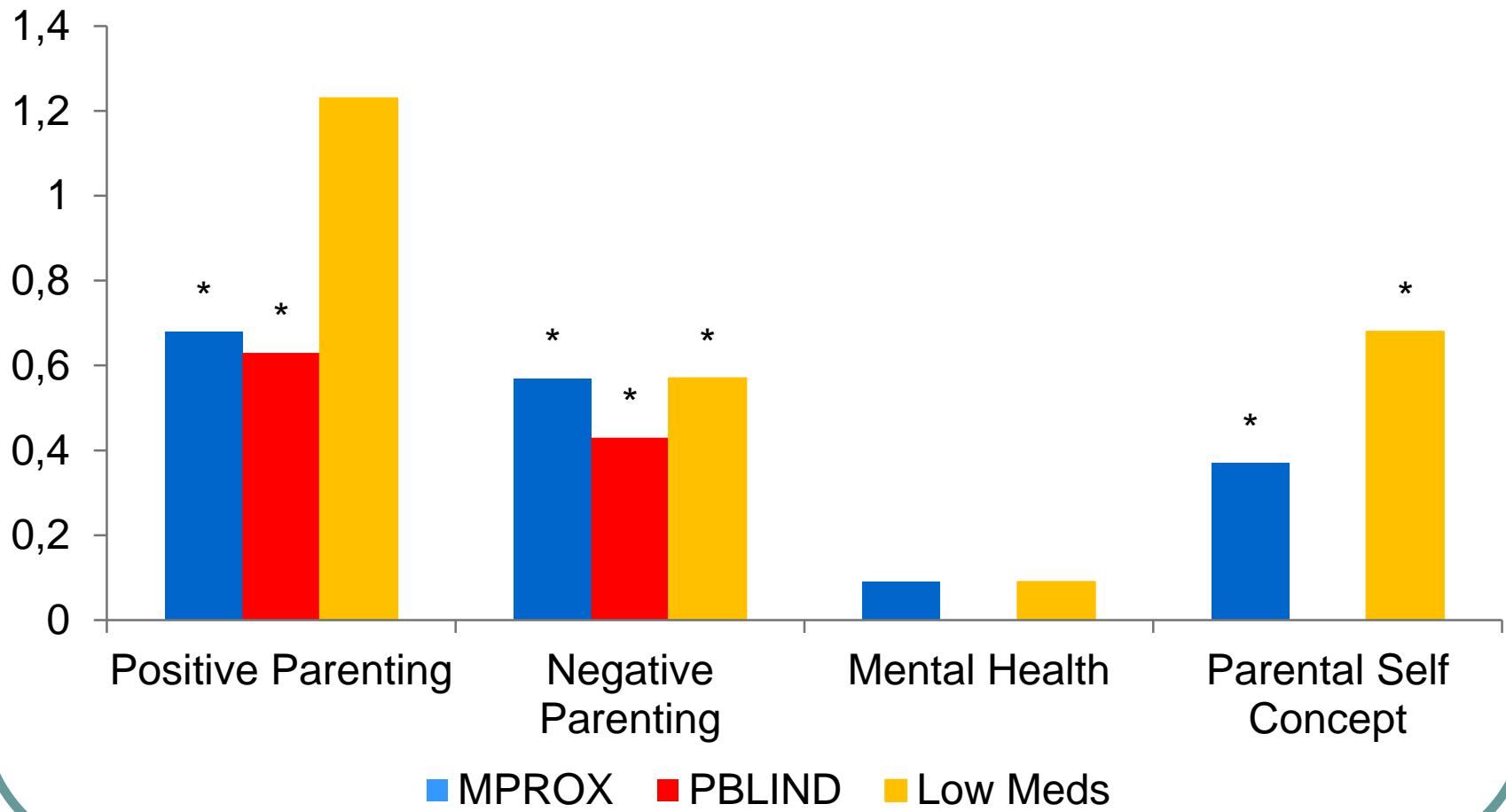
- As a guide the effect size for medication is approximately 0.7 – 1.0



# Child Outcomes SMD



# Parental Outcomes SMD



# Behavioural Interventions



# Helping you to pay attention



# What do we know about combined parent and child interventions?

What does the current evidence tell us?



# Rationale

- Behavioural interventions often show limited generalisability in randomized controlled trials perhaps because they are often delivered by parents at home or in the clinic (Daley et al 2014).
- Adding school-based, and child-focused interventions may help to enhance generalisation

# Combined parent and child focused interventions

- Several treatment studies have combined child-focused and parent focused elements (e.g. Abikoff et al 2013; Webster-Stratton et al 2011; Pfiffner et al 2007) and reported positive results.
- few studies have systematically assessed the additional value of a child-focused element to parent training.
- Combination interventions often tend to be much more intensive. For example Webster-Stratton et al (2011) delivered up to 22 two hour sessions for the parents and 22 two hour sessions for the child.

# Combined parent and child focused interventions

- Some early studies combined parent training with child-focused treatment (targeting child self-control) and assessed the separate and combined effects.
- In these studies there was no evidence for additive effects of child-focused problem solving treatment on ADHD and conduct problems (Horn et al 1990; Horn et al 1987).

# Other Psychological and dietary interventions

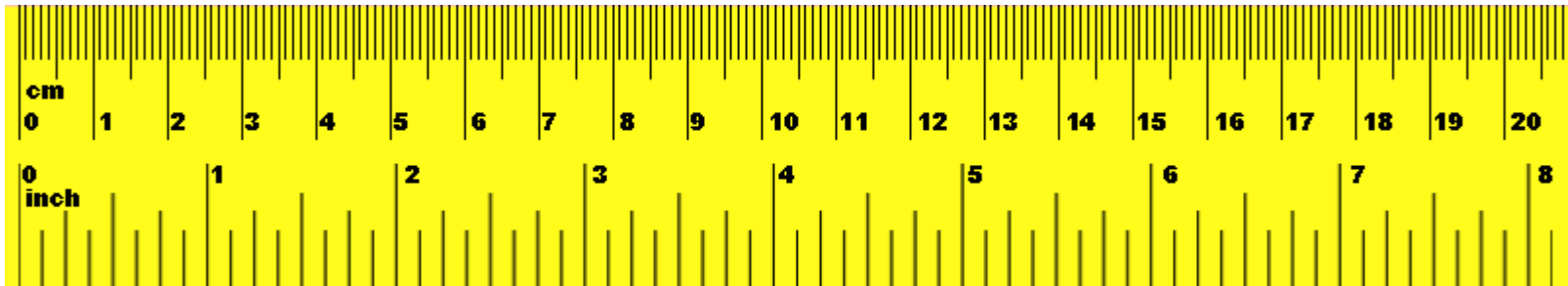
- Sonuga-barke et al (2013) conducted six meta-analyses of randomised controlled trials to assess the effects of dietary and psychological treatments on ADHD symptoms for individuals
- Patients were aged between 3 and 18 years with an ADHD diagnosis (or who met recognized symptom thresholds).
- This was the first meta-analysis to include both dietary and psychological domains of ADHD treatments.

# Analysis

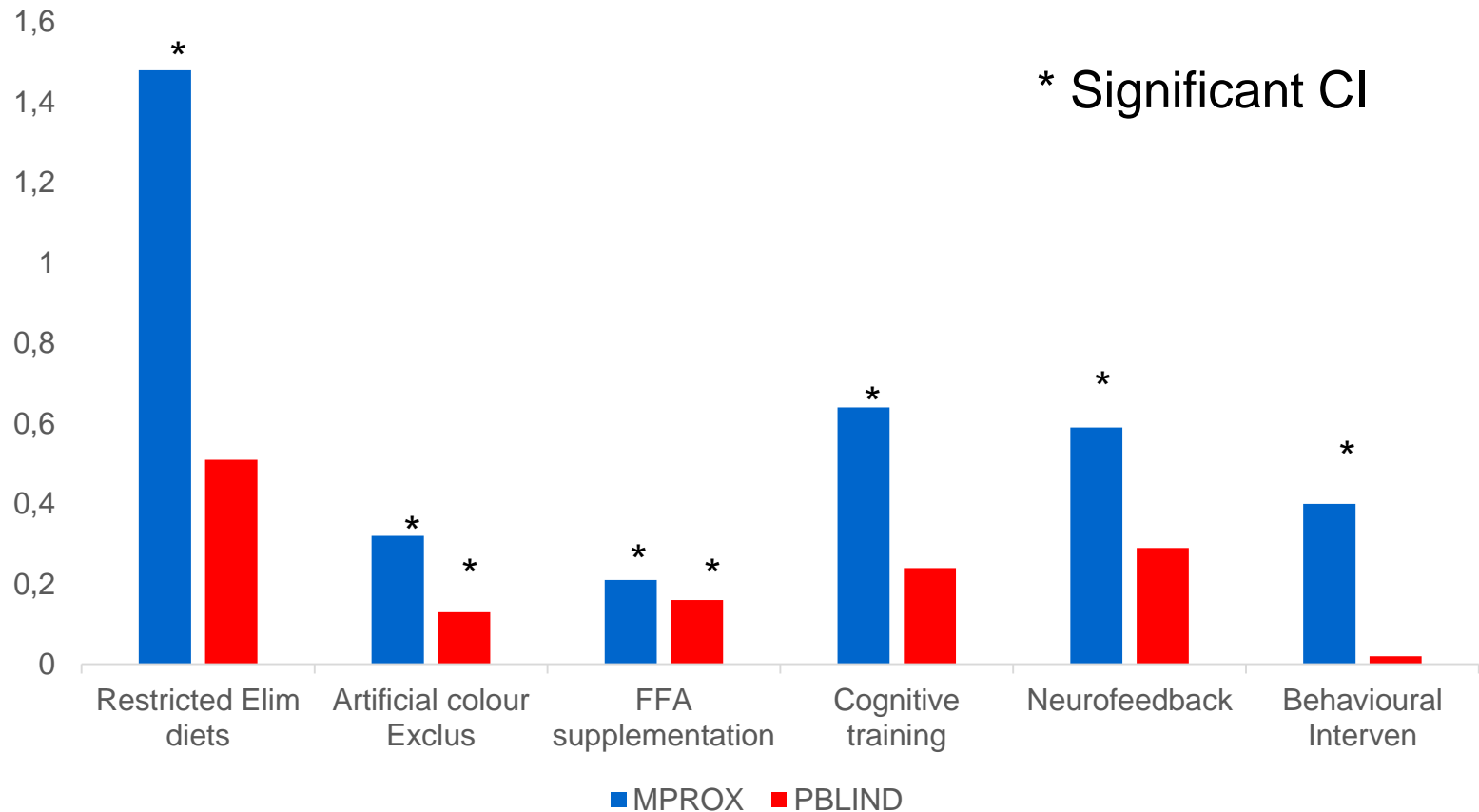
- *Most proximal assessment.*
- *Probably blinded assessment*
- Both analysis conducted on ADHD outcomes (Sonuga-barke et al 2013)

# The Ritalin Ruler

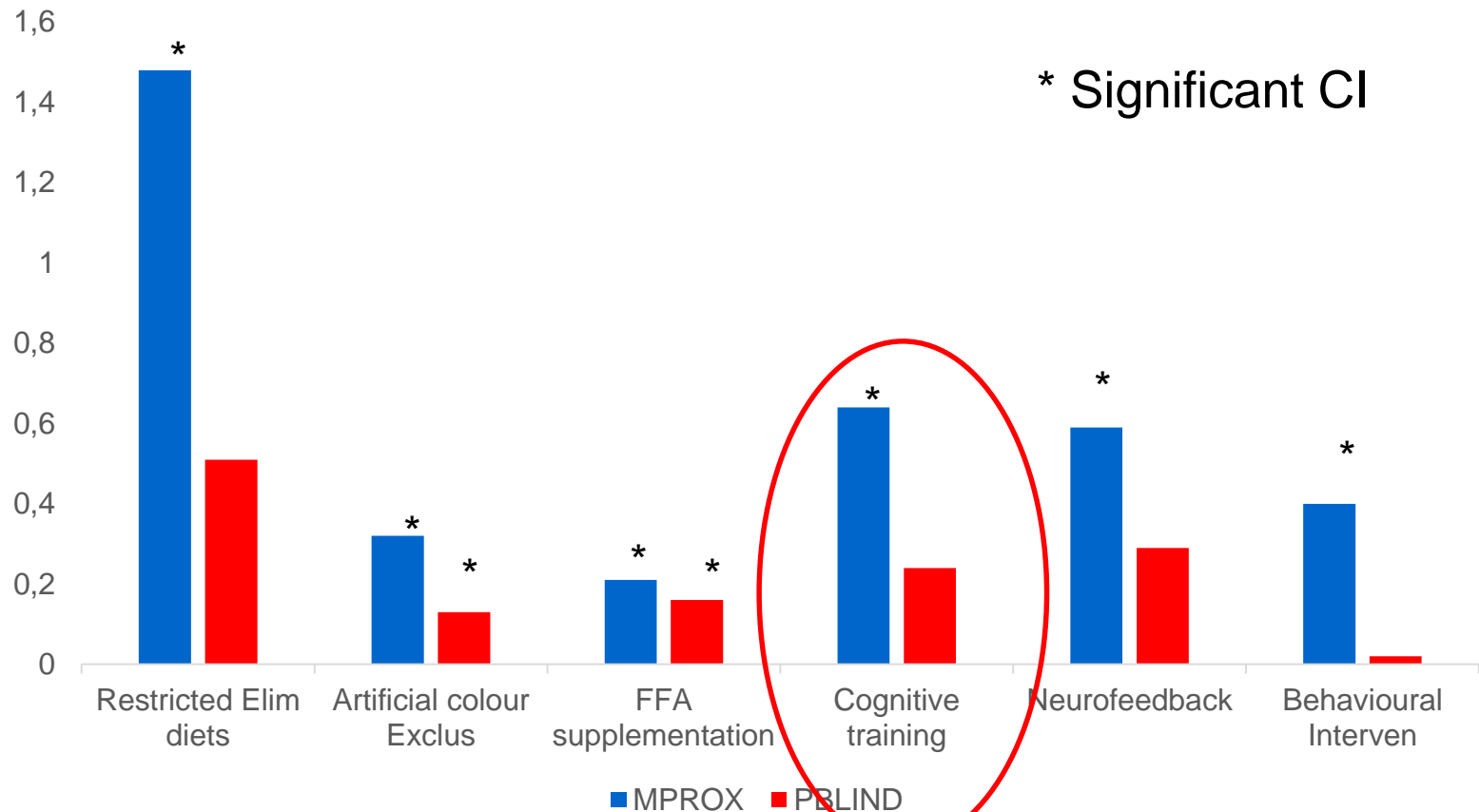
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# Meta-analysis results

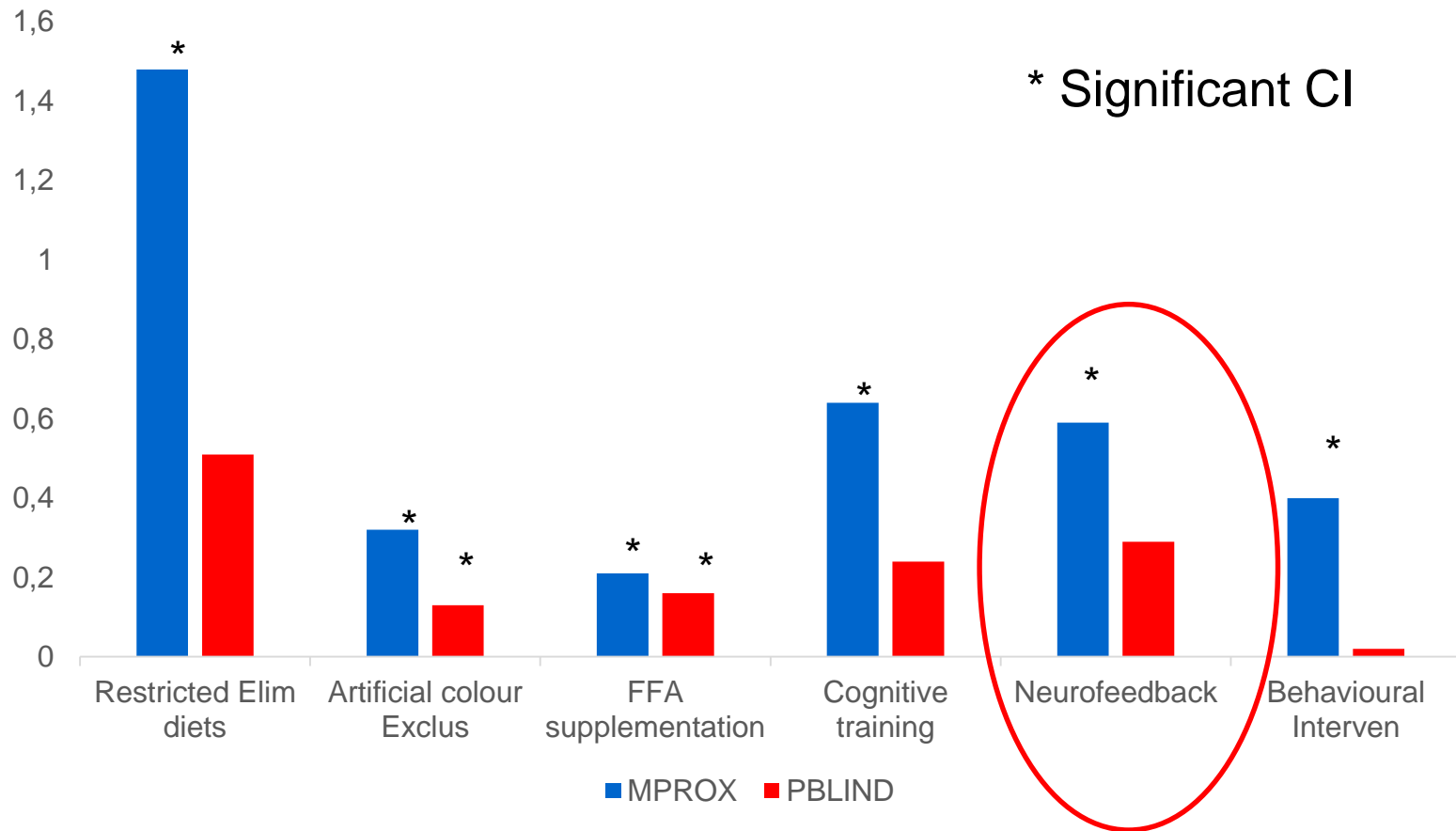


# Meta-analysis results





# Meta-analysis results



# Cognitive training or neurofeedback

- Recent meta-analyses have questioned the efficacy of both cognitive training and neuro-feedback as treatments for core ADHD symptoms in terms of data from blinded outcomes (Cortese et al 2015; Cortese et al 2016).
- Two recent studies assessed the separate and combined effects of cognitive training and parent focused behavioural training.
- Steeger et al (2015) found no benefit of the combination on unblinded measures of ADHD.

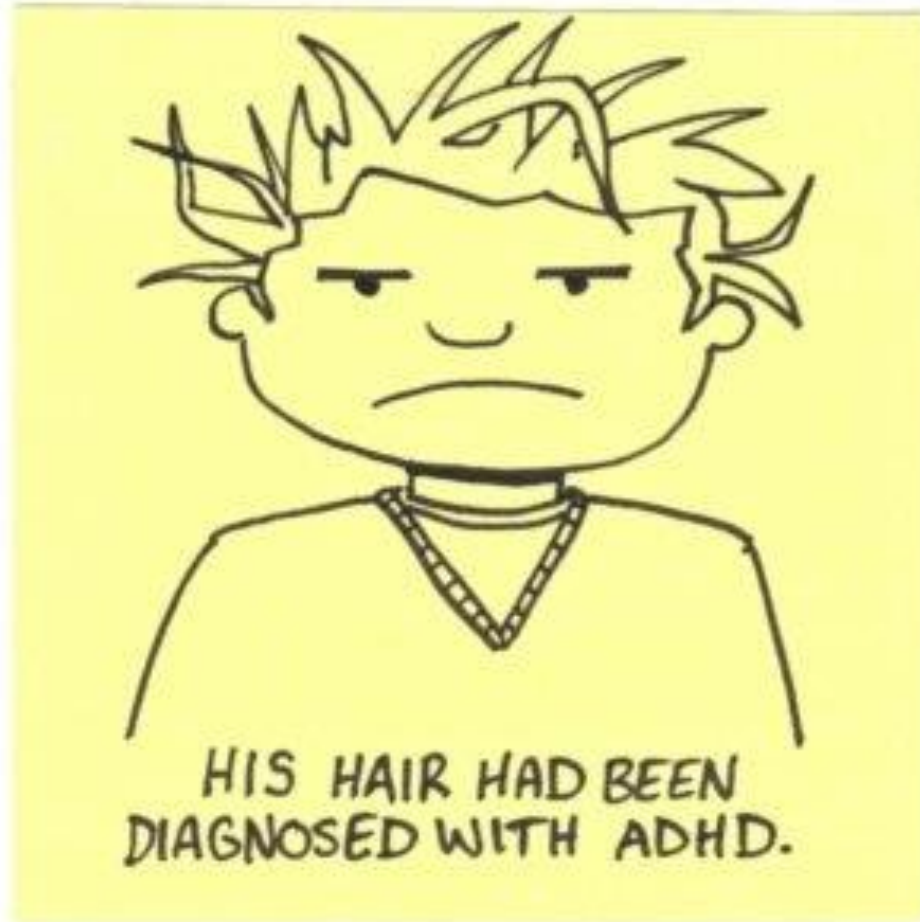
# Cognitive training or neurofeedback

- Maleki et al (2014) found some evidence of benefits of combined cognitive training and parent training on unblinded outcomes (effect sizes not available) compared to parent training or cognitive training alone, however this study had a number of methodological limitations.
- To date, no RCTs have assessed the added combined effects of neuro-feedback and behavioural interventions in children/adolescents with ADHD.

# Combined parent and child focused interventions



# Helping you to pay attention



# What do we know about combined parent and teacher interventions?

What does the current evidence tell us?

# Combined parent and teacher interventions

- A recent meta-analysis (Chan, Fogler & Hammeress 2016) of treatments for adolescents with ADHD has demonstrated that behavioural interventions (which were mostly adolescent focused but were sometimes augmented with teacher and/or parent components) were associated with robust (Cohen  $d$  range, 0.51-5.15) improvements in mostly parent rated academic and organizational skills, such as homework completion and planner use.

# Combined parent and teacher interventions

- Although studies have shown the effectiveness of integrated school/home programmes compared to control groups (Pfiffner et al 2007; Power et al 2012; Ostberg et al 2012).
- Only one study has systematically assessed the additive value of school intervention (and a child skills training) to parent training in a sample of children with the inattentive subtype of ADHD (Pfiffner et al 2014).



# Combined parent and teacher interventions

- Results from Pfiffner et al (2014) showed superior effects of integrated home-school treatment as compared to parent training alone on
  - unblinded teacher-reported inattention
  - organizational skills,
  - social skills,
  - global functioning at post-treatment..
- However, at follow-up during the subsequent school year, differences in teacher-reported outcomes were not statistically significant

# Combined parent and teacher interventions



# Summary of evidence for behavioural interventions

- Based on current evidence the positive effects on ADHD symptoms reported by parents **are not** corroborated by independent blinded sources and may reflect a change in parents' attitudes and perceptions about their child with ADHD rather than any actual change in behaviour (Daley et al 2014).
- This is in contrast to the impact of behavioural interventions on conduct problems where the evidence from independent sources corroborates the view of parental reports.

# Helping you to pay attention

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I AM FINDING IT DIFFICULT  
TO CONCENTRATE BUT I  
AM NOT SURE WHY

# How do we successfully translate and implement behavioural interventions from one culture to another?

What does the current evidence tell us?

# Cultural adaption

## **Adapting an attention-deficit hyperactivity disorder parent training intervention to different cultural contexts: The experience of implementing the New Forest Parenting Programme in China, Denmark, Hong Kong, Japan, and the United Kingdom**

Margaret J. J. Thompson,<sup>1,2</sup> Alma Au,<sup>3</sup> Cathy Laver-Bradbury,<sup>2</sup> Anne-Mette Lange,<sup>4</sup> Gail Tripp,<sup>5</sup> Shizuka Shimabukuro,<sup>5</sup> Jin S. Zhang,<sup>6</sup> Lan Shuai,<sup>6</sup> Catherine E. Thompson,<sup>1</sup> David Daley<sup>7</sup>, and Edmund J. Sonuga-Barke<sup>1,4,8</sup>

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# Cultural adaption

- Training: Therapists in Denmark were very unfamiliar with core behavioural principles
- Translation needs to be very careful. For example in Japanese there was not a word for reward
- Mode of delivery needs to be carefully considered, in the UK home based is preferred. In Denmark most mothers work and in Japan strangers do not enter the home so clinic based was preferred.
- Target group requires consideration. In UK, Denmark and Japan its parents, in China it is Grand Parents

# Cultural adaption

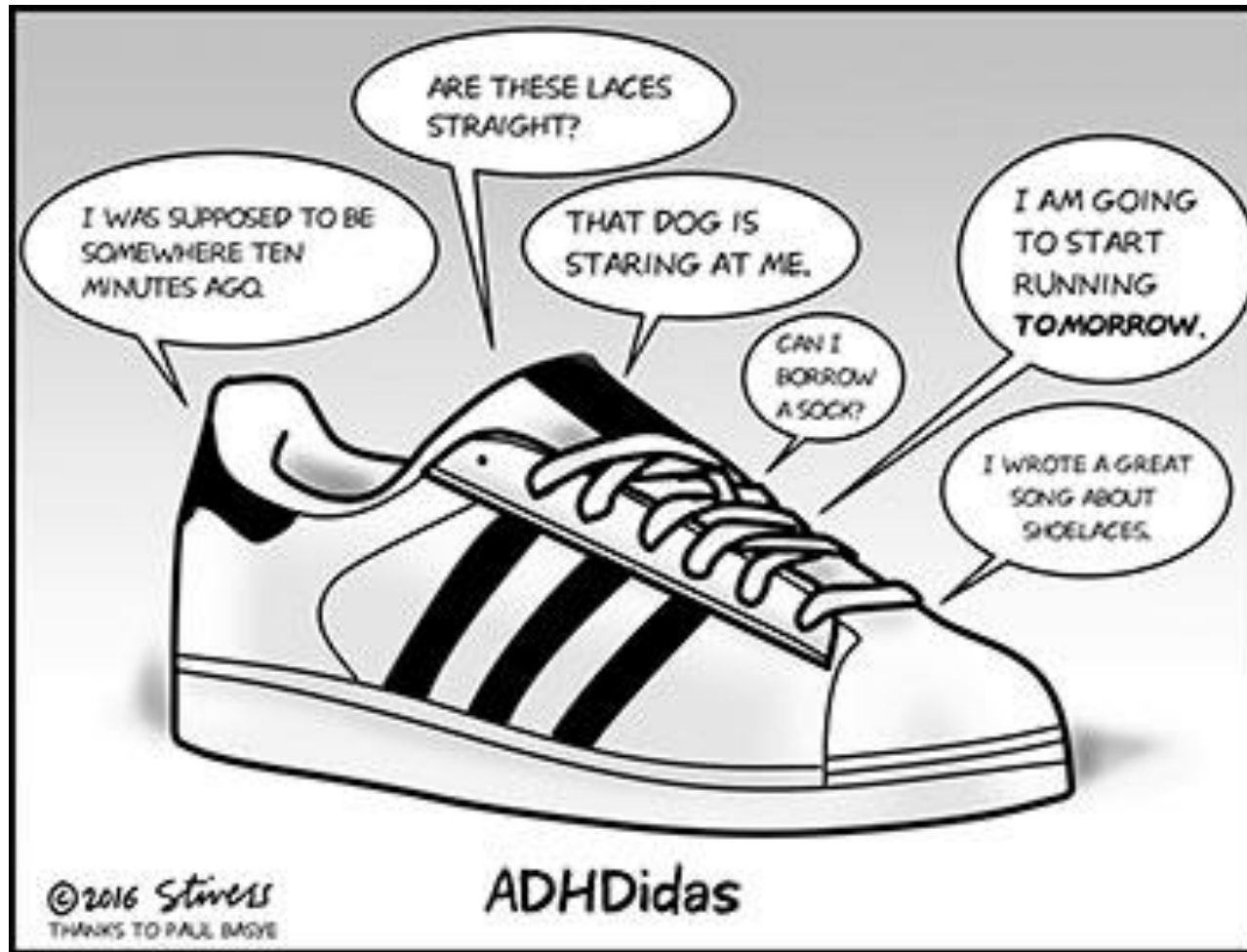
- Different strategies may work better in some cultures than others.
  - Danish mothers really struggled with praise
  - Japanese mothers struggled with collaboration and negotiation
  - Chinese grandparents struggled with limit setting



# Conclusions

- Strong evidence for behavioural interventions, but weak evidence for change in objective measures of ADHD.
- Weak evidence for the unique contribution of child focused interventions when combined with parent focused interventions.
- Stronger evidence for the contribution of school focused interventions when combined with parent interventions but limited long term results.
- Cultural adaption is always important when thinking about implementing new interventions in Italy

# Helping you to pay attention



Thank you

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