

A home-based computerized executive function training for children with Cerebral Palsy: preliminary results of a Randomized Controlled Trial

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INTRODUCTION

Cerebral palsy (CP) is a motor function disorder associated with Executive Function (EF) impairments that seem to have an impact on daily life. The aim of this study was to **evaluate the efficacy of an on-line and home-based training programme** compared to usual care.

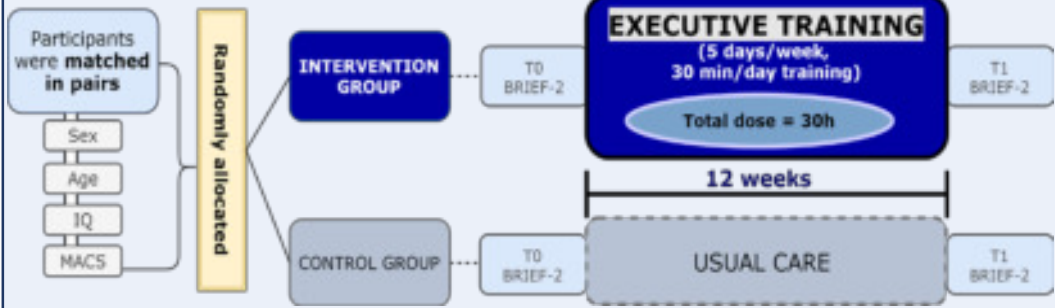
PATIENTS AND METHOD

Table 1. Demographic data

AGE	Mean (SD)	10.05 (1.16)	MACS	Level (n)	I (7), II (10), III (1)
	Range	8-12		IQ	Mean (SD)
GENDER	Female (n)	6	RCPM		Range
	Male (n)	12			

IQ: Intelligence Quotient; MACS: Manual Ability Classification System; RCPM Raven's Coloured Progressive Matrices.

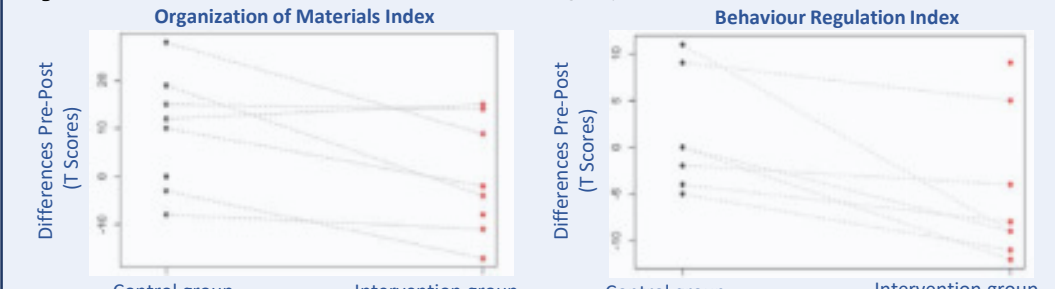
Figure 1. Description of method



BRIEF-2: Behavior Rating Inventory of EF Second Edition, Caregivers Form
Differences between groups were compared using Wilcoxon and T tests.

RESULTS

Figure 2. Differences between intervention and control groups



- The intervention group showed significant improvements compared with usual care group in the Behaviour Regulation (t-value=3.46, p-value=0.04) and Organization of Materials (t-value=2.68, p-value=0.01) indexes of BRIEF-2.
- There was a tendency towards a better scoring in the Inhibit and Task-Monitor scales and the Global Executive Composite index.
- There were no significant improvements in the remaining BRIEF-2 subscales and indexes.

CONCLUSION

- ❑ Executive training seems to increase self-regulation and children's ability to organize their materials at school or home.
- ❑ These preliminary findings suggest that a 3 months cognitive training programme might be a **cost-effective intervention with short-term effects on EF.**

REFERENCES

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❑ Piovesana, A. et al. (2017). Randomized controlled trial of a web-based multi-modal therapy program for executive functioning in children and adolescents with unilateral cerebral palsy. *Disability and Rehabilitation*, 39(20), 2021-2028.