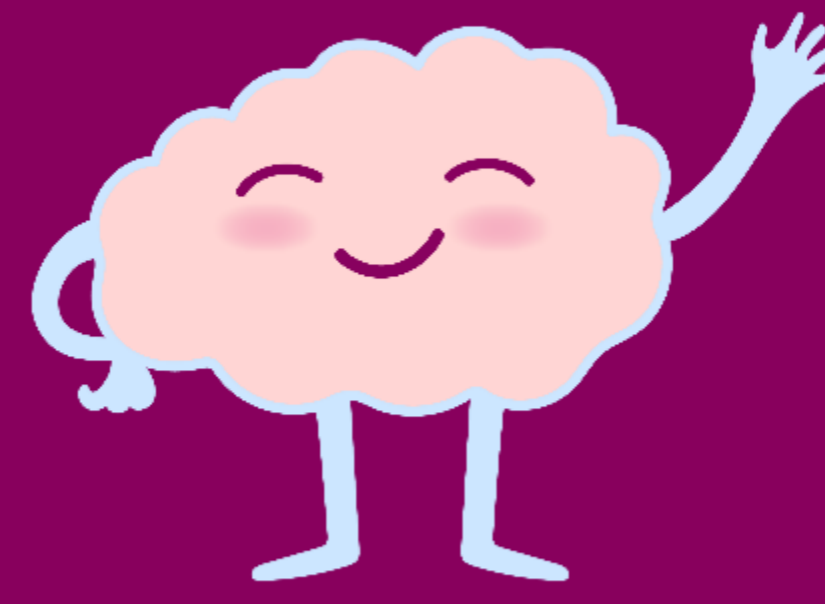


# HABIT-ILE@HOME FOR CHILDREN WITH BILATERAL CEREBRAL PALSY : A PILOT STUDY

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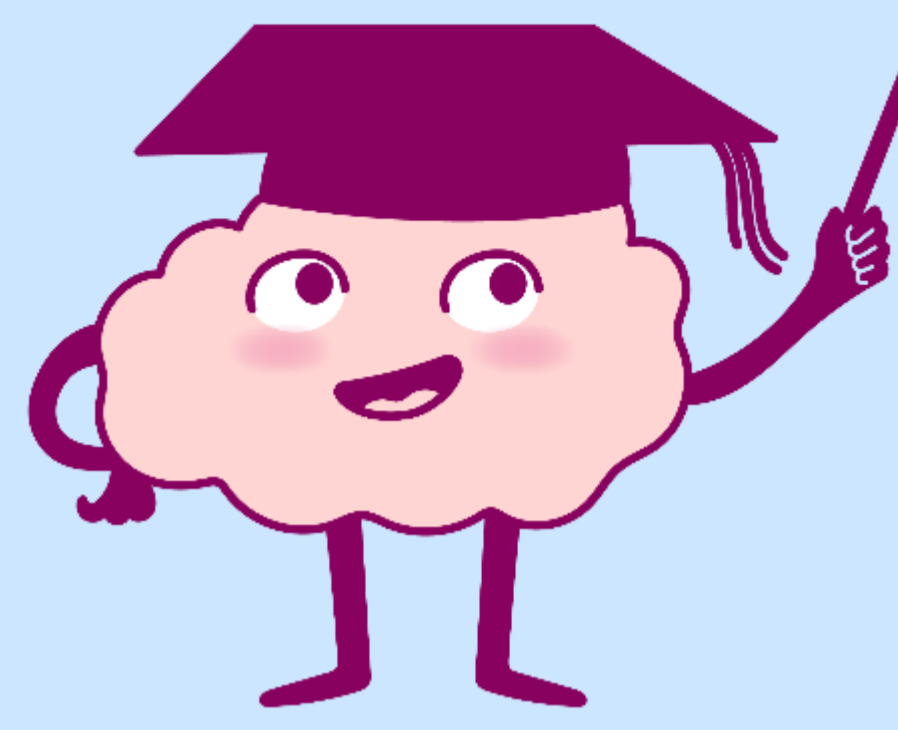
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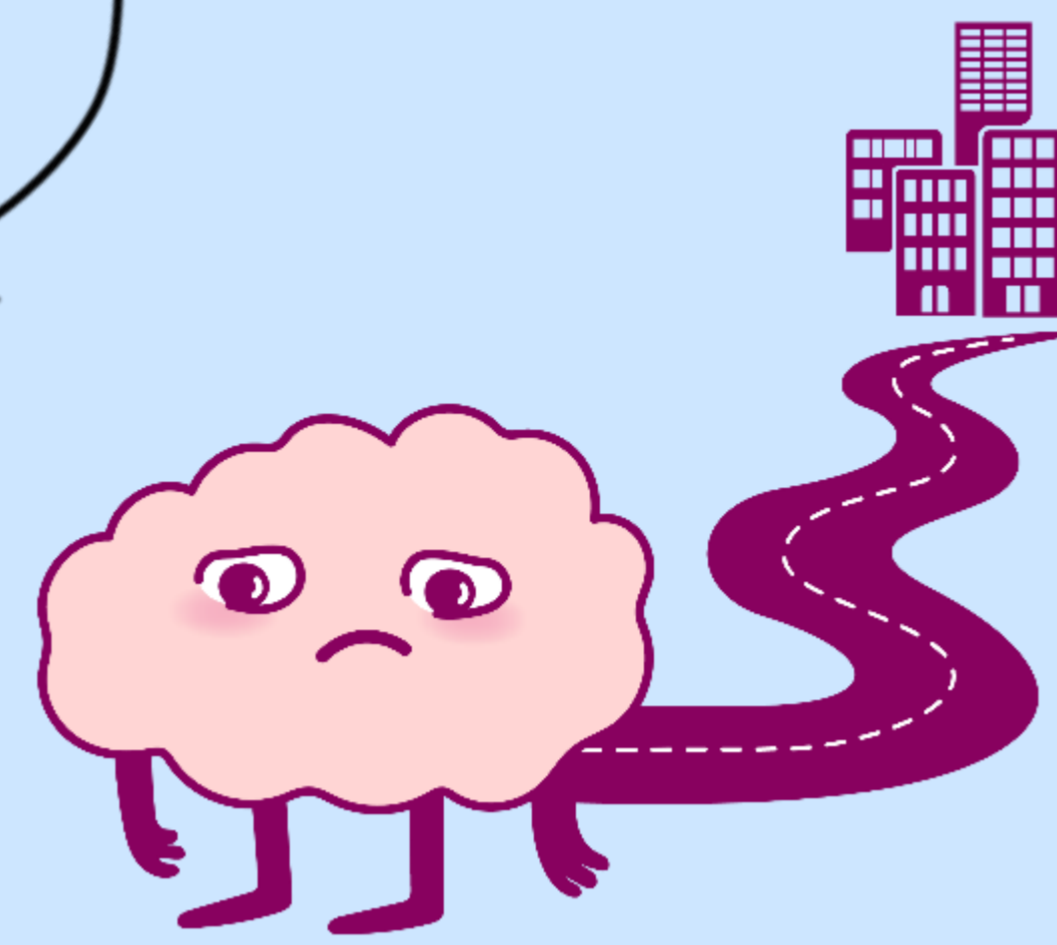
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## INTRODUCTION

Interventions, based on the principles of motor skill learning like Hand-Arm Bimanual Therapy Including Lower Extremities (HABIT-ILE), have demonstrated excellent effectiveness in improving motor function and daily life independence of children with bilateral cerebral palsy (BCP).

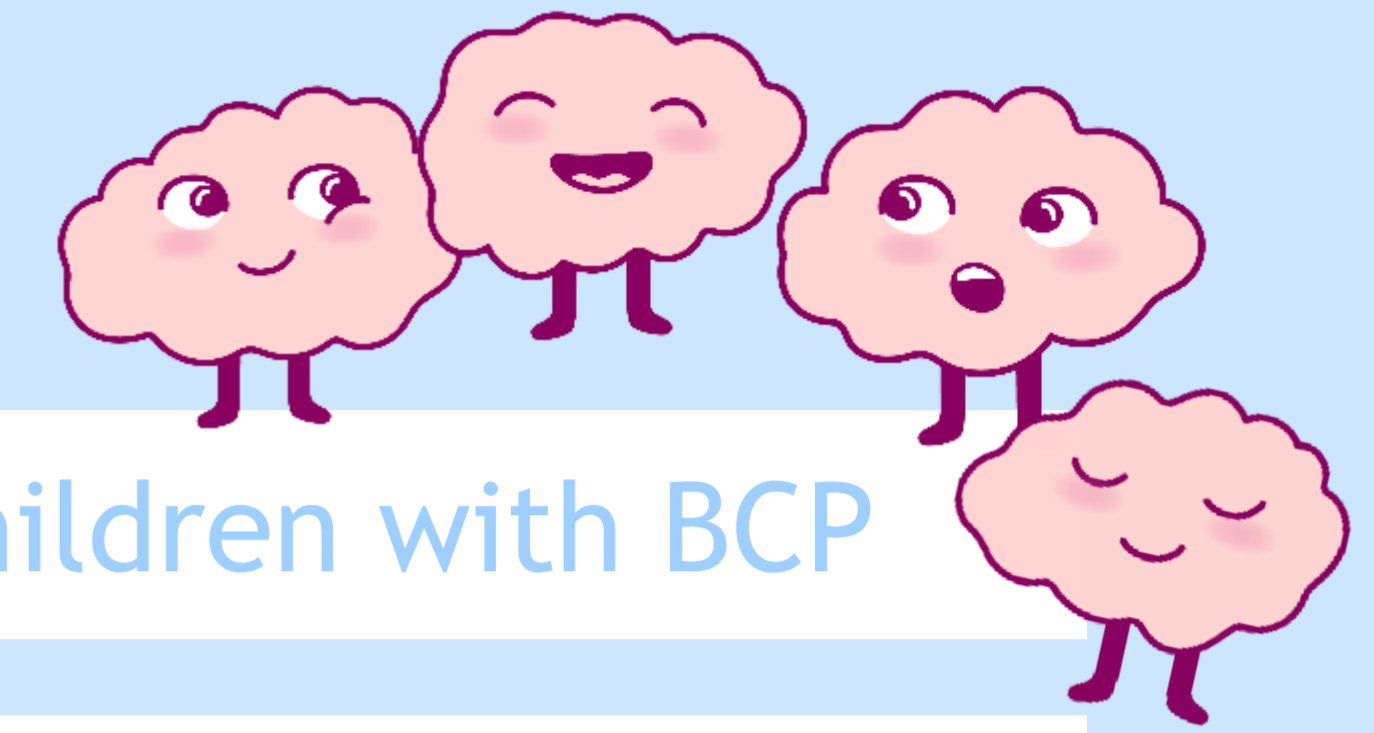


**BUT** patients living far from big cities do not have easy access to such interventions, usually applied in the form of camps.



Is it possible to implement HABIT-ILE at home with a specifically designed virtual device and a remote training?

## METHODOLOGY



Participants

n= 4 Children with BCP

5 to 10 years old

MACS = 2 to 3, GMFCS= 2 to 4

Intervention

1 REAtouch® + REMOTE training  
 + 1 caregiver at home



1 week

5 days/week

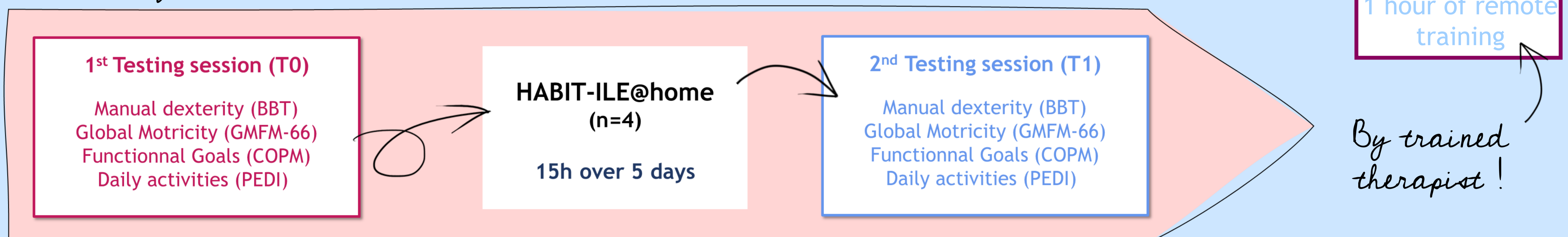
3 hours/day

2 hours in autonomy

1 hour of remote training

By trained therapist!

### Timeline of experiment



## RESULTS

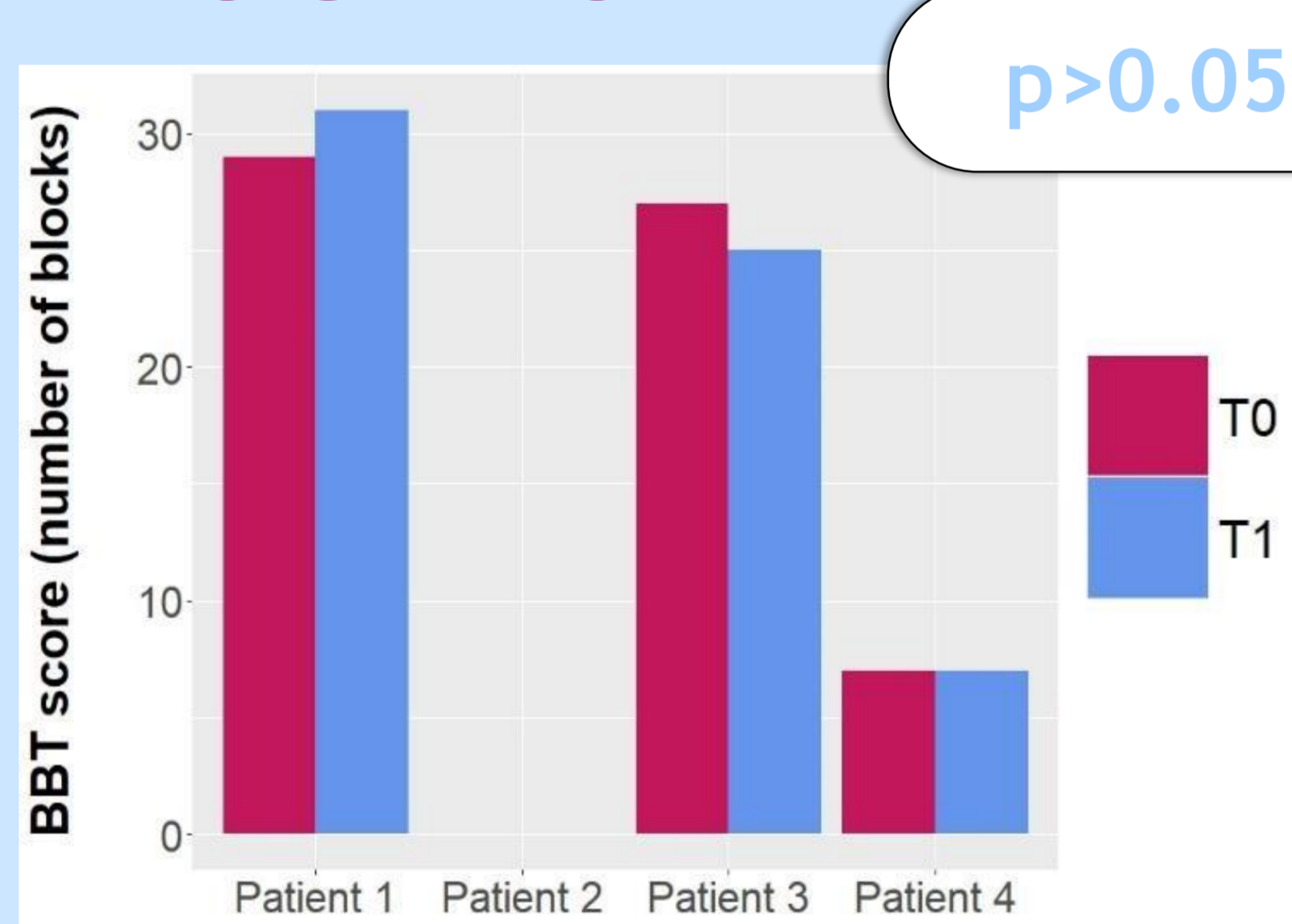


Fig. 1. BBT at T0 and T1

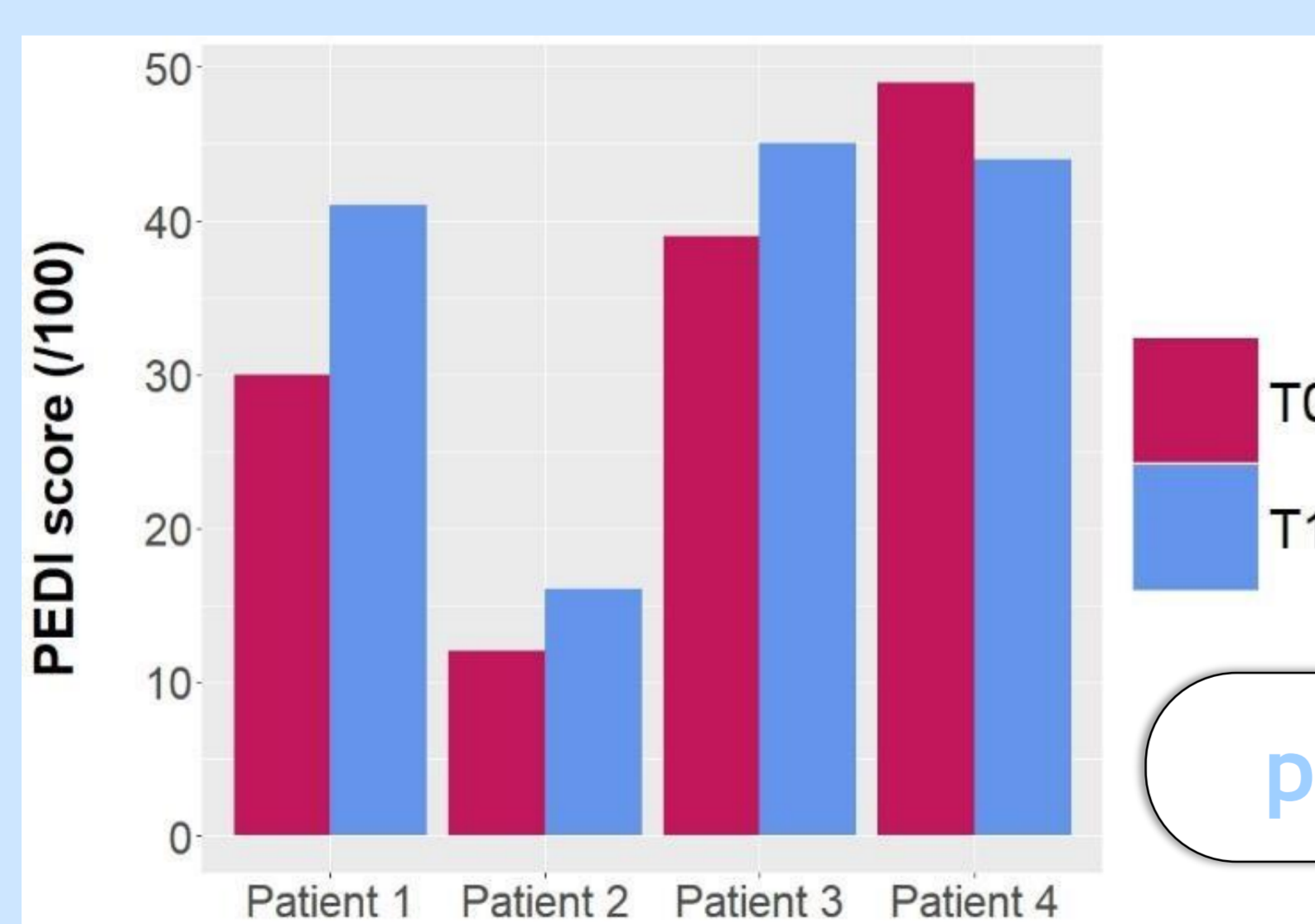
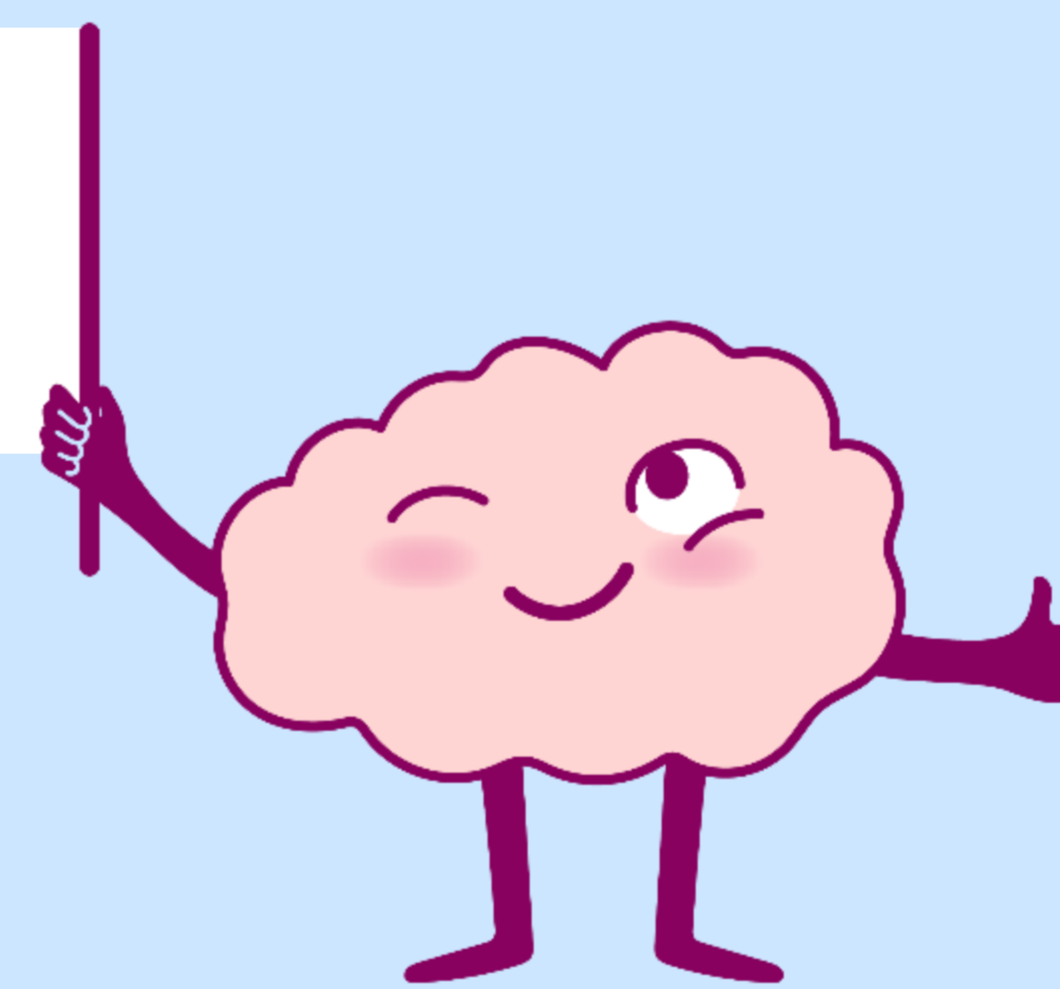


Fig. 2. PEDI at T0 and T1

Significant changes were observed for the **GMFM**.



Non-significant changes were observed on the **COPM, BBT and daily activities**.

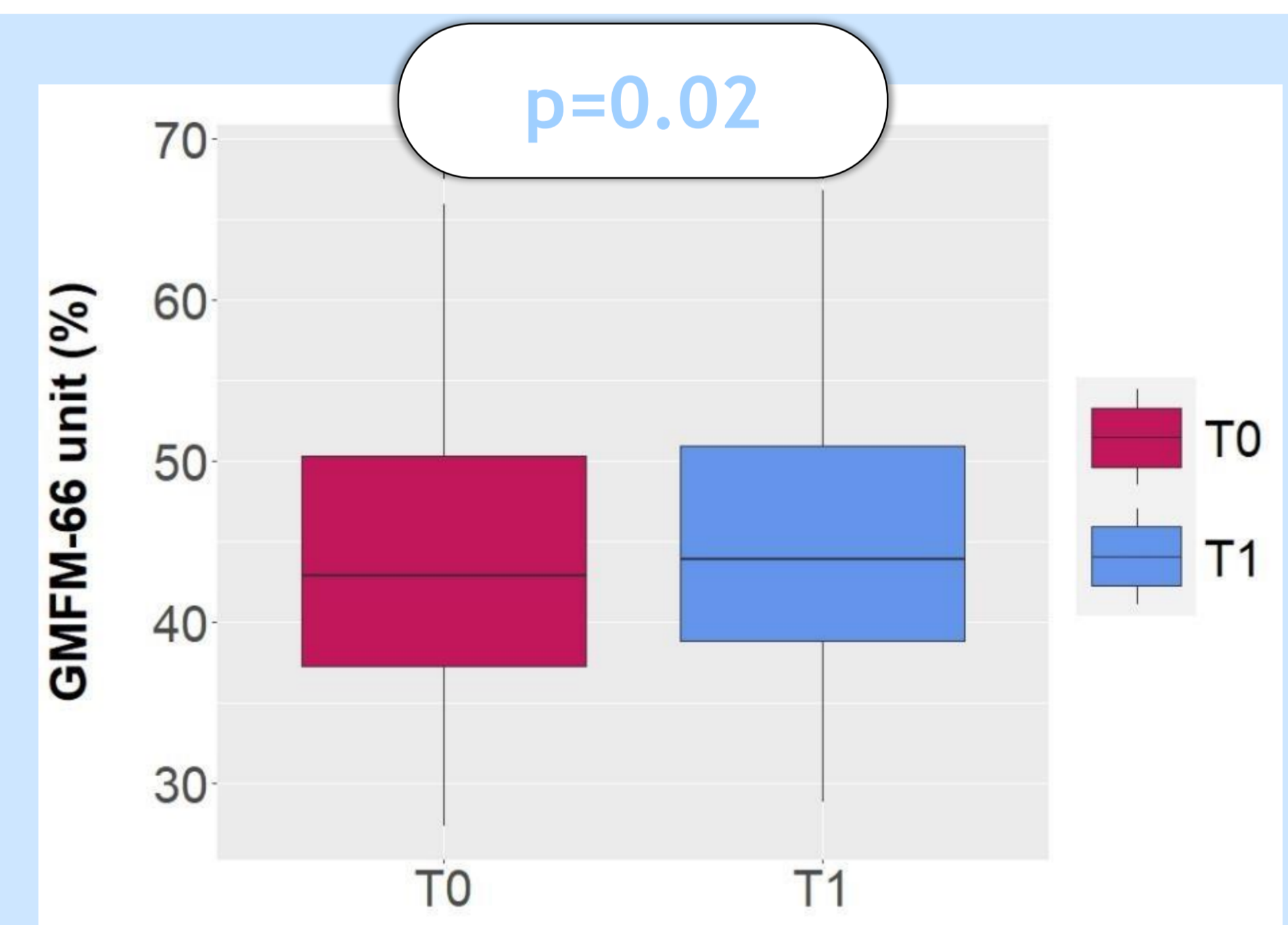


Fig. 4. GMFM-66 at T0 and T1

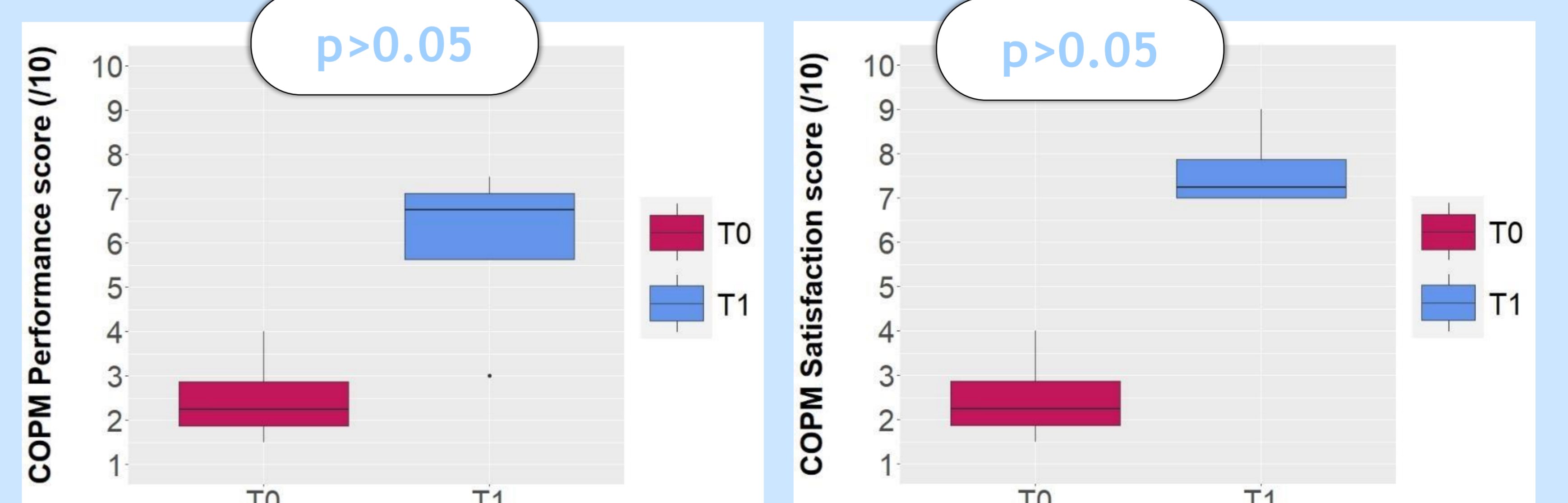
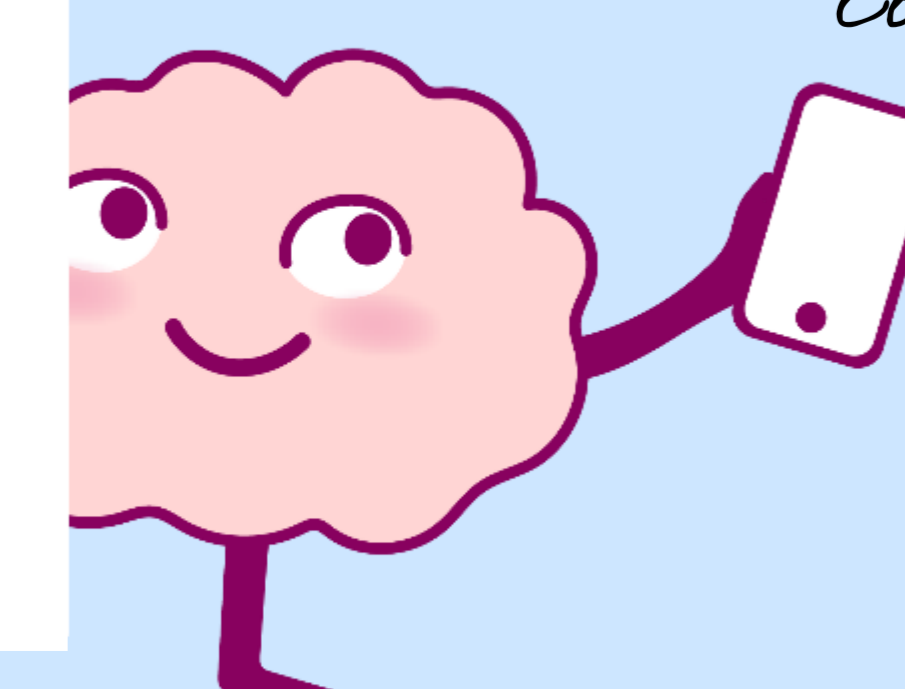


Fig. 3. COPM (Performance and Satisfaction) at T0 and T1

## CONCLUSION

This totally new approach of HABIT-ILE intervention showed promising preliminary results and deserve to be further investigated. We can hypothesize a higher dosage of therapy would lead to significant improvements. Along with the use of a specifically designed virtual device and a remote training, this would provide a practical, innovative and complementary approach for intensive rehabilitation opportunities.



Scan here to see the protocol of the upcoming randomized controlled trial ...





Graduated in physical therapy and motor sciences from the UCLouvain since 2020, I developed during my studies a great interest for neurological rehabilitation. I therefore decided to complete my initial training with a **master 2 specialization in neurological rehabilitation**. I then worked during the beginning of the year 2021 at the William Lennox Neurological Center. After having mainly taken care of adult patients, I wanted to look into neurological rehabilitation for children. I therefore decided to undertake a thesis at the **Institute of NeuroScience** of the UCLouvain University on the principles of motor learning entitled *Functional neurorehabilitation using intensive therapy and evaluation at home for children with cerebral palsy*.

If you have among your patients or if you know children with Bilateral Cerebral Palsy, do not hesitate to send us an email so that they can benefit from a free two-week intensive HABIL-ILE camp:

[contact-mslin@uclouvain.be](mailto:contact-mslin@uclouvain.be)

