

# Evaluating the acceptability and efficacy of Cognitive Orientation to daily Occupational Performance (CO-OP) Approach for children with autism

Presented by:  
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## Authors

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# Background and Aims



## WHY MOTOR DIFFICULTIES?

- Approximately one third of autistic children have been reported to have clinically significant motor difficulties
- Motor difficulties can lead to activity limitations and participation at home, school and the community

**Limited evidence for interventions to address motor difficulties for these children**

## RESEARCH AIMS

- The aim of this research is to establish the efficacy, acceptability, and feasibility of the CO-OP program for children with autism aged 5-10 years

# Background and Aims



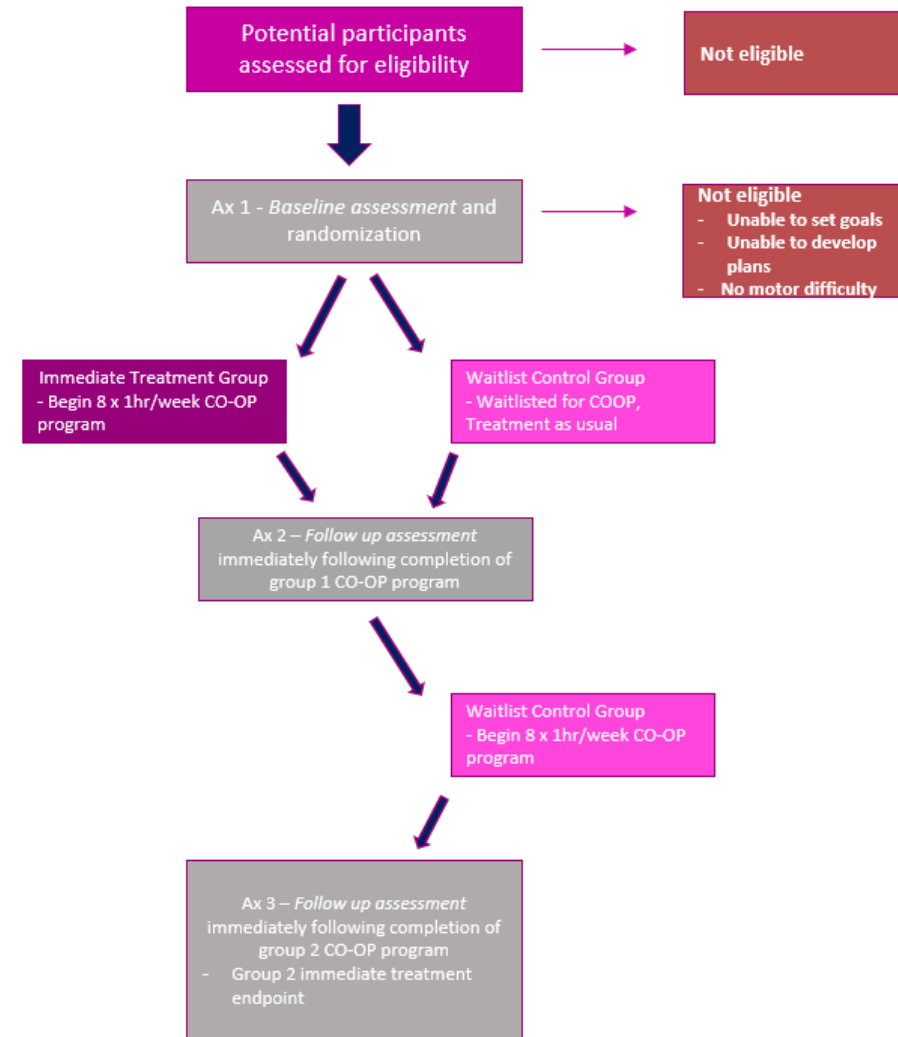
## WHAT IS CO-OP?

- Gold standard for supporting motor skill acquisition for children with developmental coordination disorder (DCD)
- A top-down, client centred, performance based, verbal problem-solving approach
- Enables skill acquisition through strategy use and guided discovery
- Shown to enhance neuroplasticity as it is explicit, task specific and goal driven
- Enables clients to contribute meaningfully to achievement of their goals

(Mandich & Polatjko 2004) )

# Methods

- A waitlist randomised controlled trial ([ACTRN12621001615875](#)) was implemented for children with autism and co-occurring motor difficulties aged 5-10 years.
- Potential participants assessed for eligibility:
  - Aged 5-10 years
  - Diagnosis of autism
  - Motor difficulties ( $\leq 16^{\text{th}}$  percentile on Movement ABC-2)
  - Able to set own goals and develop own plans

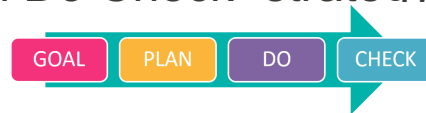


## Session 1 - SETTING GOALS (COPM)

- 3 motor goals are set
- Child rates performance and satisfaction of goals
- Independent clinician rates performance of goals

## Session 2 - INTRODUCE KEY STRATEGY

- “Goal Plan Do Check” strategy is introduced



## Sessions 3 – 9

- Using “Goal Plan Do Check” and the clinician utilising Dynamic Performance Analysis, Guided Discovery and Enabling Principles, the child is encouraged to independently develop strategies to succeed in their goals that promote generalisation and transfer

## Session 10

- Child re-rates performance and satisfaction of goals
- Independent clinician rates performance of goals

## Assessments

### Motor Skills

- Movement ABC
- DCD Questionnaire

### Goal Performance

- COPM
- PQRS (blinded)

### Phenotypic profile

- Family history questionnaire
- SRS-2
- Vineland-3
- BRIEF-2

### Participation

- PEM-CY

### Parent Interview

# Participants

- 26 participants and their caregivers consented (23 male, 3 female)
  - 7 excluded before group randomisation (insufficient difficulties with motor skills = 2; did not meet minimum language requirements = 5)
  - 8 withdrew or did not attend (during COOP = 3, during waitlist period = 2, lost to follow up before randomisation = 1, did not attend intake = 2).
- Eleven participants (all male, aged 6.67-10.60 years) completed the program (CO-OP  $n=5$ , waitlist  $n=6$ ); children randomised to waitlist completed the program after 10 weeks



# Goal Improvement – child rated

- Improvement in motor goals post CO-OP were seen in both child performance and satisfaction ratings, and clinician goal performance quality ratings (PQRS).
- Improvement in goal performance and satisfaction post CO-OP was clinically meaningful.

COPM Child Rating	Change in Performance	Change in Satisfaction	
Immediate Intervention (n=5)	4.27	4.93	Post CO-OP
Waitlist (n=6)	1.07	1.68	Post Waitlist (TAU)
<b>Combined CO-OP (n=11)</b>	<b>3.12</b>	<b>3.58</b>	<b>All participants post CO-OP</b>

# Goal Improvement – clinician rated

There was a higher average change in Performance Quality Rating Scale in the CO-OP group compared to waitlist group.

PQRS Clinician Rating (blinded)	Change in Performance	
Immediate Intervention (n=5)	2.34	Post CO-OP
Waitlist (n=6)	0.72	Post Waitlist (TAU)
<b>Combined Post CO-OP (n=11)</b>	<b>2.27</b>	<b>All participants Post CO-OP</b>

# Acceptability of CO-OP

*"It teaches the child that they're allowed to make mistakes and work on those."*

*"It's a lot different to being told what to do to, then deciding to do it yourself and thinking you're so smart and have made a great plan."*

*"It's probably teaching us to maybe give him a bit of ownership over what he's learning and maybe get him to start to be more independent."*



# Facilitators and Barriers

## Facilitators:

- Goals that were related to everyday living were easier to implement at home.
- Parent being an active participant – helped them when they needed to be involved at home
  - “I guess being part of it made it easier because then you know you're tuned in. You know what's going on. Otherwise as a parent, you kind of sitting there going ‘What's going on? What do I do with myself for the hour?’ So that - that was really good.”
- Having the homework sheets going over goals and plans



## Barriers:

- Having goals that were more challenging to work on at home
- Environmental factors: Outdoor sessions could be distracting
- Having the time to practice

# Generalisability and transfer

- “It works for him, and whether that's something he can apply, you know, at school or, you know, when he needs to do different difficult tasks, I'd hope that we can keep using that language with him.”
- “I think it's more towards the end that we started to implement that in more than just our goals for the CO-OP stuff like it was other things that would come up....I'd be like, ‘Oh, what about that’, trying to apply that strategy to other situations as well. So that was really valuable.”
- “It's probably teaching us to maybe give him a bit of ownership over what he's learning and maybe get him to start to be more independent.”



# Reflections

- CO-OP provides great potential for autistic kids
- Questioning can be unfamiliar and overwhelming, Additional anxiety
- How to get intake right?
- Strategy use may be more limited with autistic kids vs DCD kids
- How to get intake right?
- Autistic kids may benefit from more than one block to help them generalise GPDC

# Conclusion

CO-OP offers a viable intervention to address child chosen goals for autistic children with co-occurring motor difficulties and a sufficient level of communication.



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