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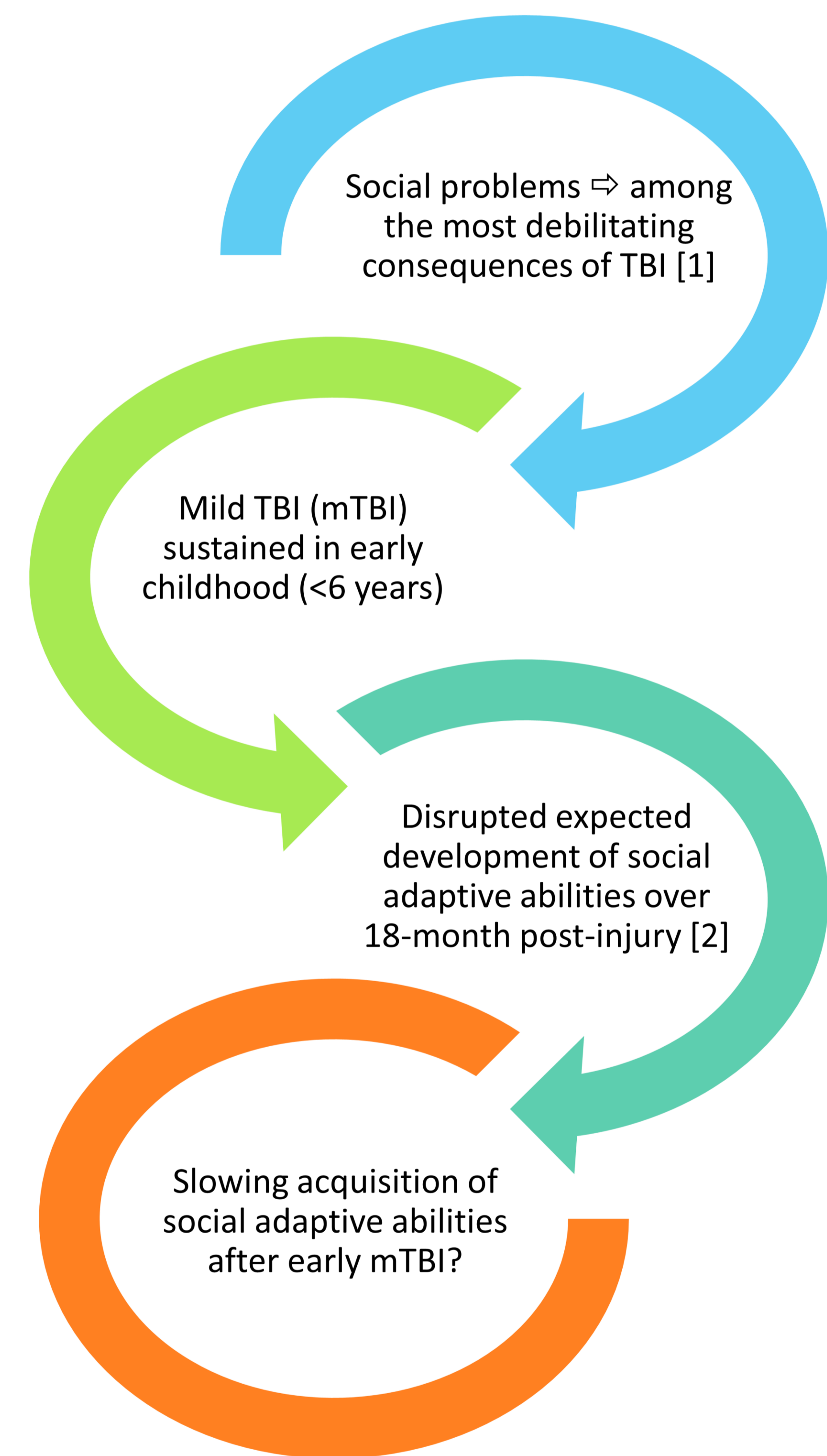
# Long-term changes in social adaptive abilities following early mild traumatic brain injury

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## INTRODUCTION



## OBJECTIVE

- To explore whether the slowing in the acquisition of social adaptive abilities persists in the long-term (60-month post-injury)

## METHODS



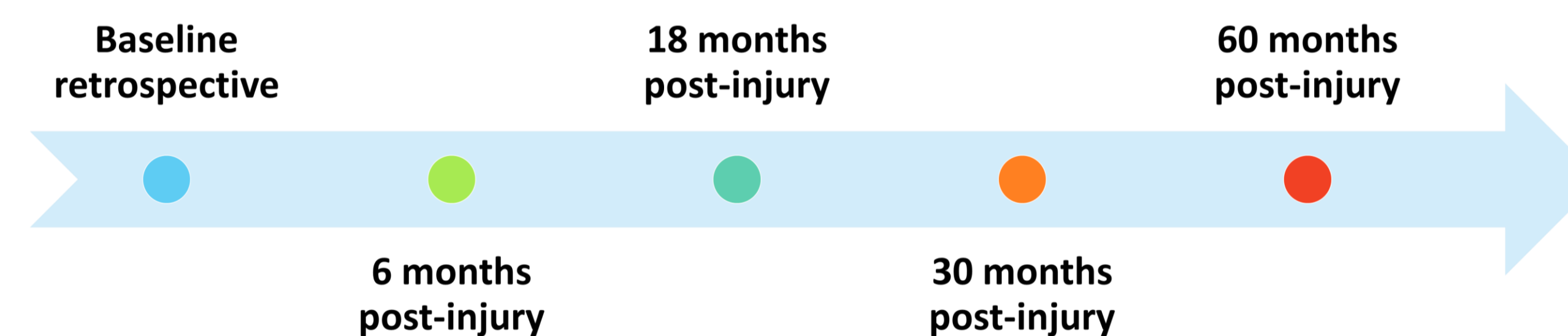
### Participants

- 81 children with mTBI (38 girls) aged 1.5 to 5 years at injury
- 60 with orthopaedic injury (OI; 34 girls) aged 1.5 to 5 years at injury



### Child's social adaptive abilities

- Parent-report
- Adaptive Behavior Assessment Scale-II Social skills sub-scale
- 5 assessments:



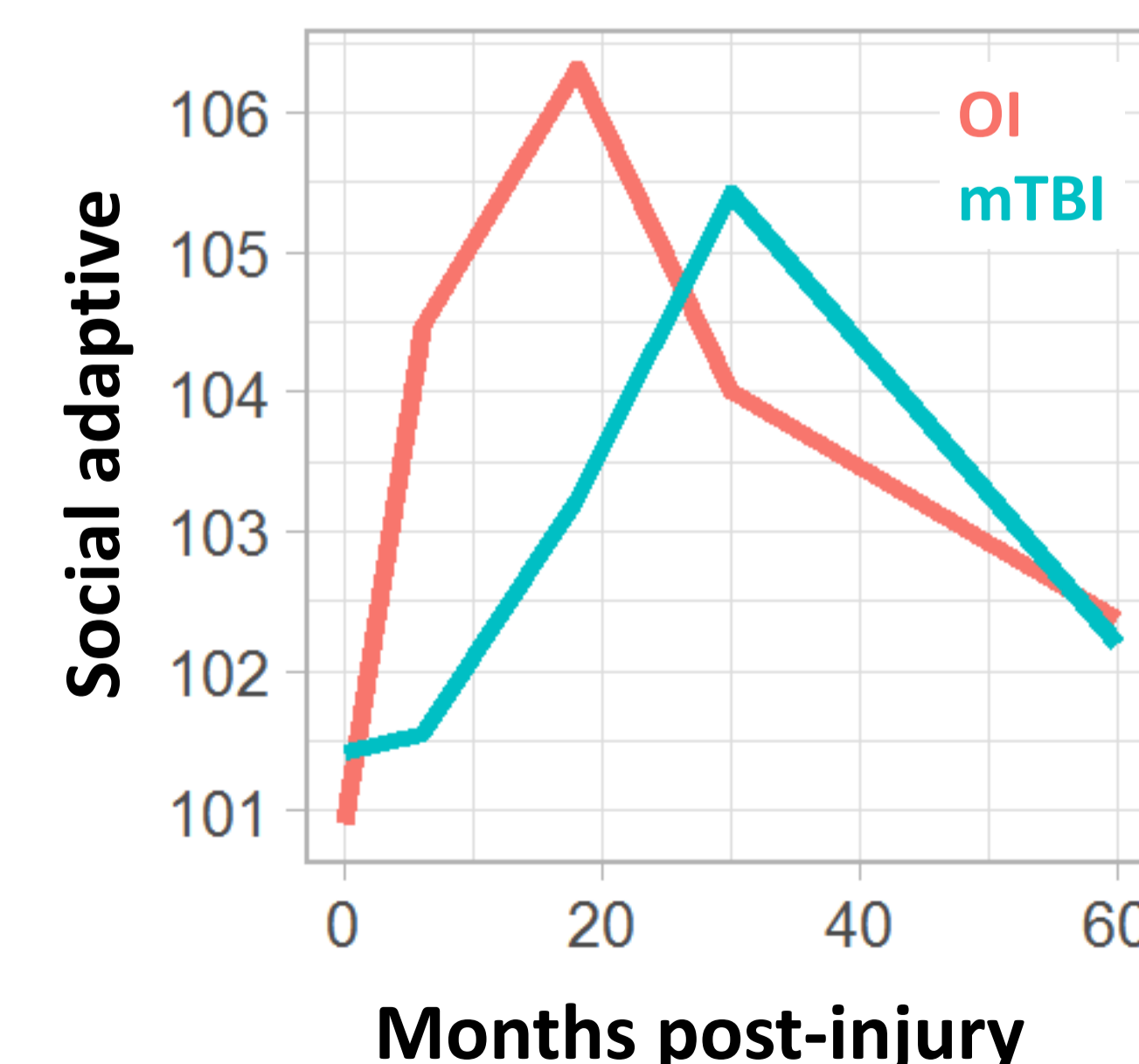
### Longitudinal analyses

- Growth curve analysis [3]
- Group effects on the time course of social adaptive abilities captured with a third-order (cubic) natural polynomial

## RESULTS

- No effect of group at pre-injury
- Marginal or significant effect of group on all time terms

|                       | OI     | mTBI    | p-value |
|-----------------------|--------|---------|---------|
| <b>Fixed Effects</b>  |        |         |         |
| Baseline              | 100.9  | 101.4   | .83     |
| Time                  | 0.8    | -0.03   | .05     |
| Time <sup>2</sup>     | -0.03  | 0.01    | .04     |
| Time <sup>3</sup>     | 0.0003 | -0.0002 | .04     |
| <b>Random Effects</b> |        |         |         |
| Baseline              |        | 109.43  |         |
| Time                  |        | 0.016   |         |
| Residual              |        | 102.96  |         |



## DISCUSSION

- Children with OI**
  - 0-18 months post-injury:  $\uparrow$  by 0.40 point per month
  - 18-60 months post-injury: progressive  $\downarrow$  by -0.08 point per month
- Children with mTBI**
  - 0-6 months post-injury: remained at the pre-injury level
  - 6-30 months post-injury: slow  $\uparrow$  by 0.15 point per month
  - 30-60 months post-injury:  $\downarrow$  by -0.14 point per month

## Conclusion

- Early mTBI may disrupt the expected developmental progression of children's social adaptive behavior
- The developmental profile of social abilities in children with mTBI appears to follow the same overall pattern as other children of the same age, but with a delayed onset after a 6-month period of stagnation and a slower improvement rate

## REFERENCES

- [1] Yeates et al., 2007; [2] Dégeilh et al., 2018; [3] Mirman, 2014

