Bridging early regulation and executive functions: Parental guidance addressing sleeping and eating difficulties

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Background

- Parents of autistic children often report difficulties in their toddlers' sleep and eating regulation.
- Early autism support research has focused mainly on social and communication development.
- Less is known about how early biological regulation support may shape executive function (EF) development.

Aims

- To examine whether brief parent guidance targeting toddlers' sleep and eating regulation improves early executive function in toddlers with autistic traits, compared to guidance focused on supporting attention to faces.

Methods

- Toddlers showing early autistic traits were **the M-CHAT-R/F screened from the community** (Gaze@Toddler Project, Tampere University, FI).
- **Inclusion criteria** were concerns in ADOS-2 (Toddler Module ≥ 11 scores) and parental concerns in sleeping OR eating.
- **34 toddlers' (mean age = 19.5 mo**, range 14-35 mo) parents participated in a cross-over design, receiving both types of guidance (regulation-focused and face interaction-focused) in randomized order (Fig1).

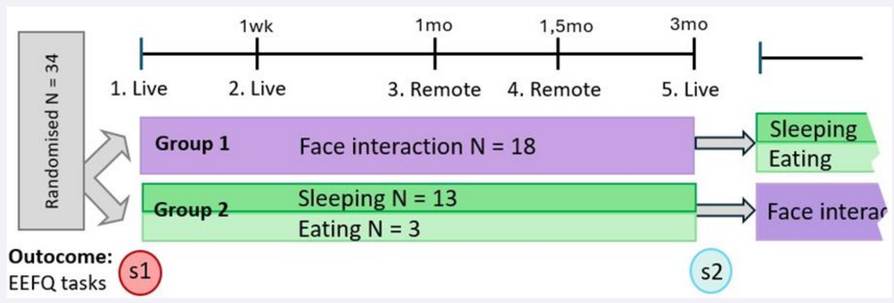

Fig 1. The cross-over design of the parental guidance. Each guidance phase lasted around three months and included five sessions (2–3 live and 2–3 remote). Only outcome (s1 vs. s2) of first type of guidance is analysed here.

Fig 2. EF outcome were assessed with the Early Executive Function Questionnaire (EEFQ) tasks measuring inhibitory control, working memory, and cognitive flexibility. The tasks were done in lab setting by a researcher.

Results

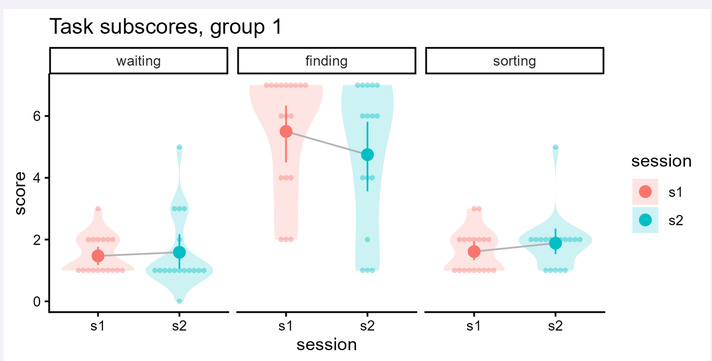

Fig 3. Executive function outcomes following the **face-focused guidance** phase. No significant changes were observed in any individual task (all $p \geq .157$).

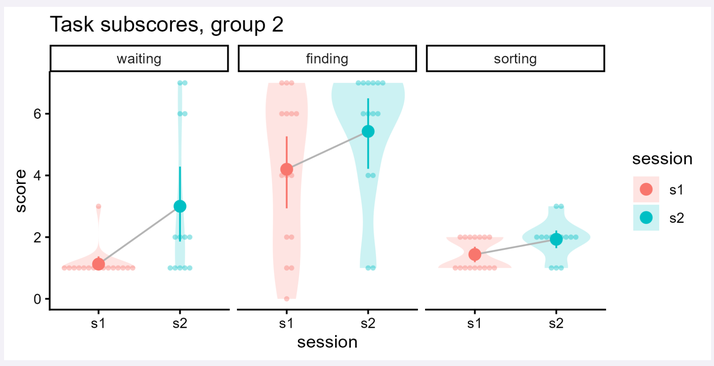

Fig 4. Changes in toddlers' executive function tasks following **the regulation-focused guidance** phase. Significant improvements were observed in the waiting game (IC; V = 0.0, p = .008), and the sorting game (FX; V = 4.5, p = .041) but not in the finding game (WM; p = .217).

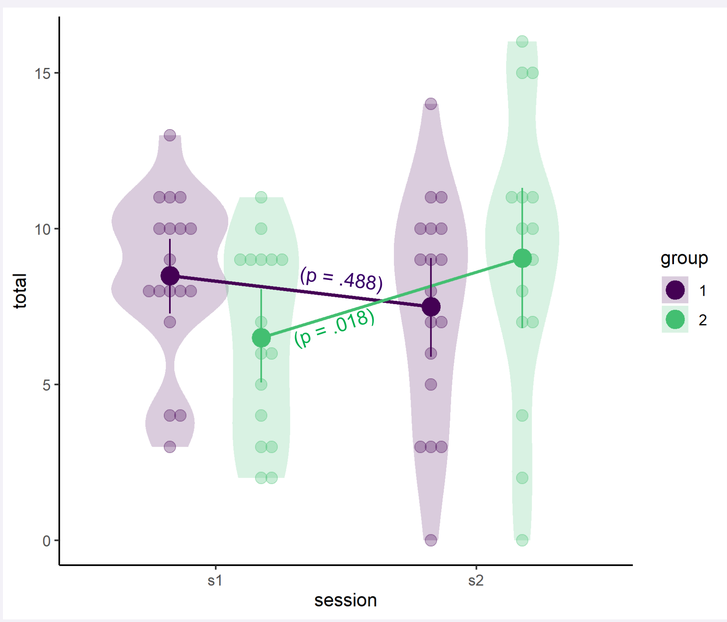

Fig 5. Increase in total executive function task scores was significantly greater after the regulation-focused guidance phase than after the face-focused guidance phase (W = 58.00, p = .008).

Conclusions

These preliminary results highlight the potential of early parental guidance targeting sleep and eating regulation in supporting self-regulation and executive functions in toddlers with autistic traits.

Future research should examine, in larger samples, the role of biological regulation mechanisms in the development of early self-regulation.

Individually tailored early support modules within parental guidance offer a promising approach to supporting multiple developmental domains in young children with autistic traits.

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