

STARS-Adjunct: AKL-T01, a Home-Based Digital Intervention as an Adjunct to Stimulant Medication for Pediatric ADHD: Academic Performance and Relation to Objective Measures of Attention

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Improvements in objective attention (TOVA API/ACS) with AKL-T01 relate to improvements in academic performance measures in the STARS-Adjunct trial.

BACKGROUND

Research question

What is the relationship between an objective measure of attentional functioning and academic performance measures?



AKL-T01 is a digital treatment designed to improve attention function in ADHD delivered through a video-game interface.

A previous STARS-ADHD RCT in children, 8-12yo, with ADHD, without ADHD medication showed:

- AKL-T01 significantly improved objective attention (Test of Variables of Attention, Attention Performance Index TOVA® API) after 4 weeks (~ 25 minutes/day, 5 days/week).¹

The STARS-Adjunct trial explored the effects of repeated administration of AKL-T01 in medicated and unmedicated children with ADHD.

METHODS

Open-label, 3-month trial (1-month on, 1-month off, 1-month on AKL-T01 treatment), across 15 sites (NCT03649074).

Participants

206 children with ADHD, 8-14yo (both medicated and non-medicated for ADHD).

Endpoints included:

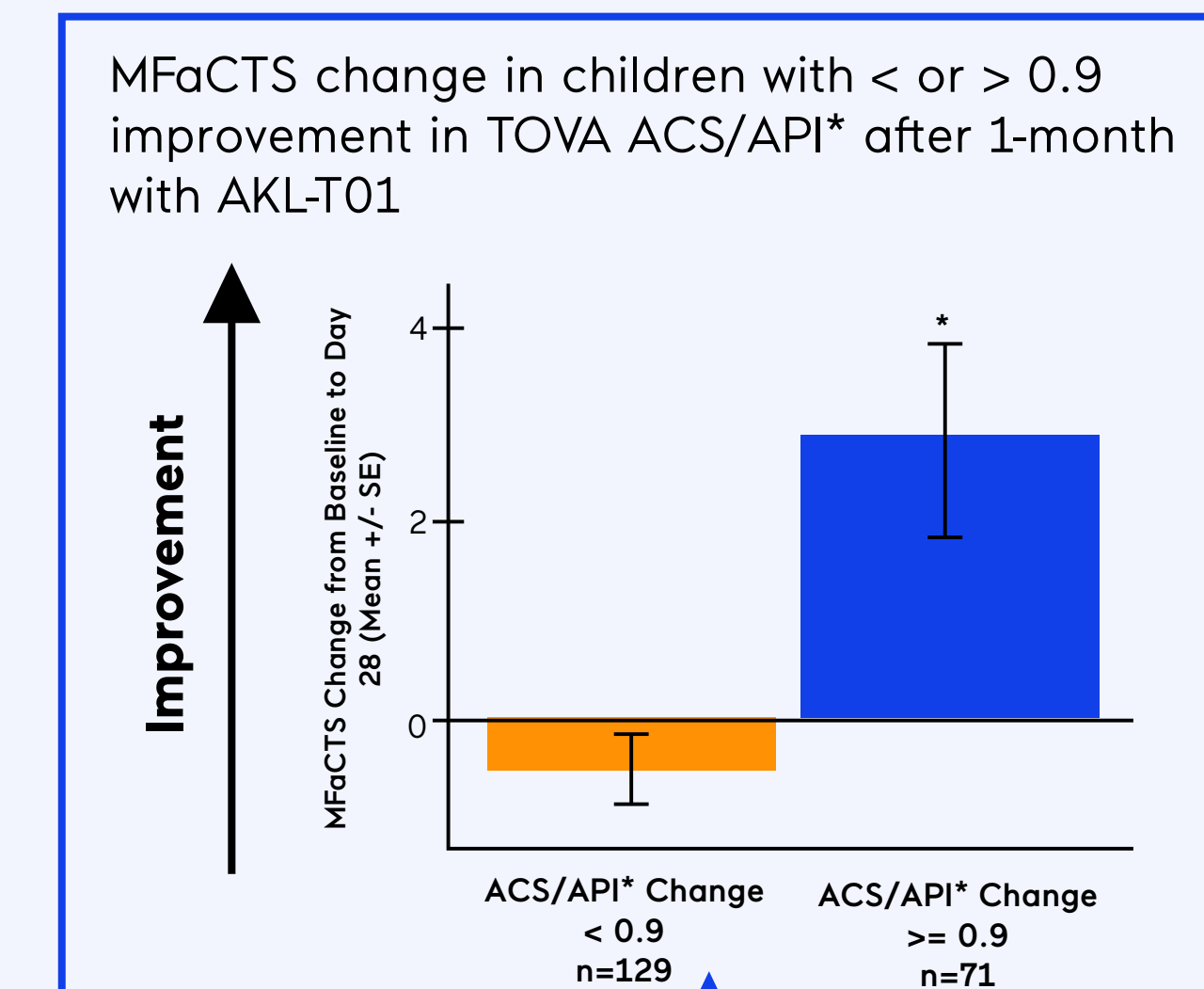
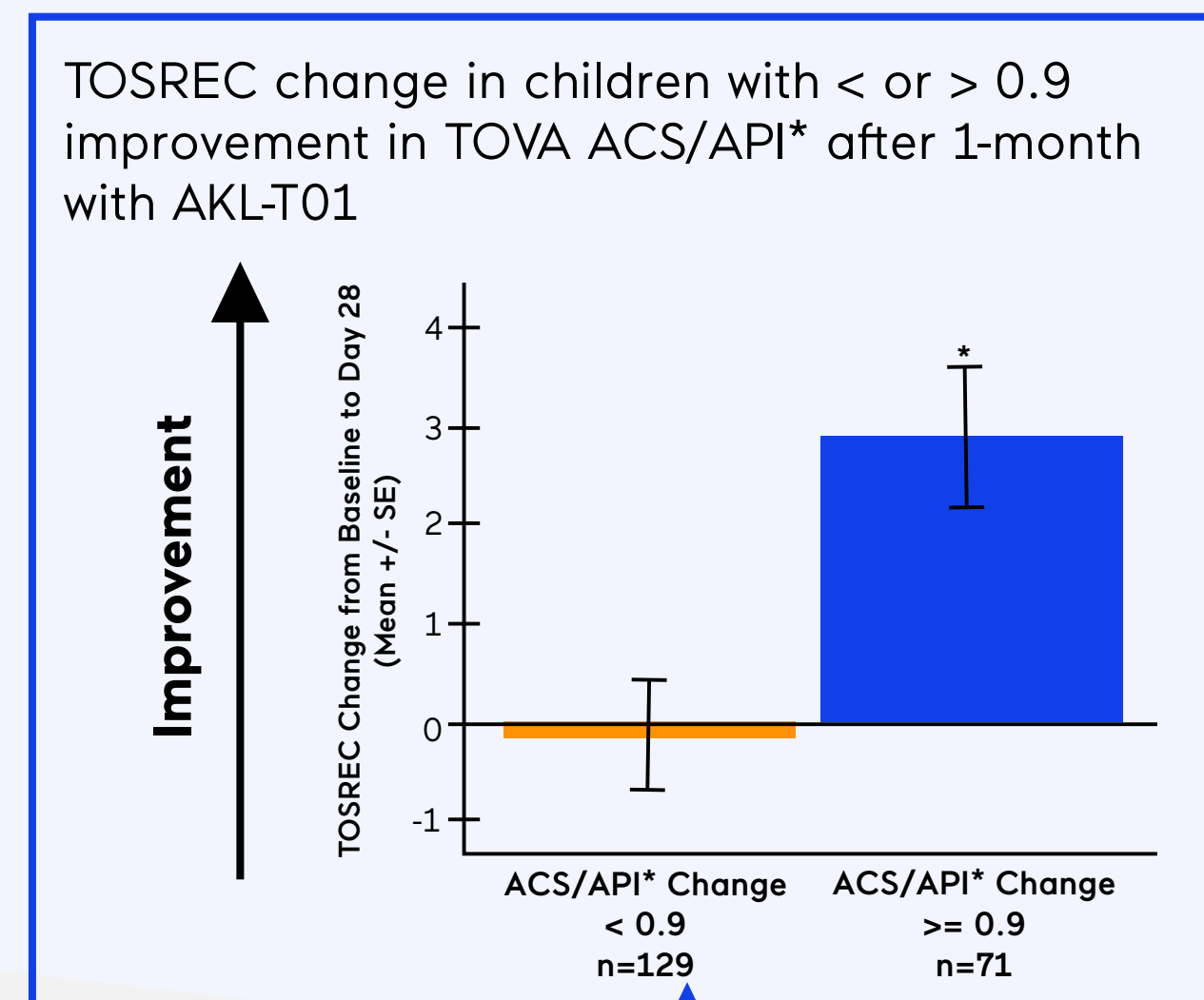
- TOVA ACS/API* objective attention
- Academic performance measures (reading: TOSREC², math: MFaCTS³)

*TOVA Attention Composite Score (TOVA ACS) is the same as the TOVA API and reflects a name change in the measure between TOVA V8 and TOVA V9.

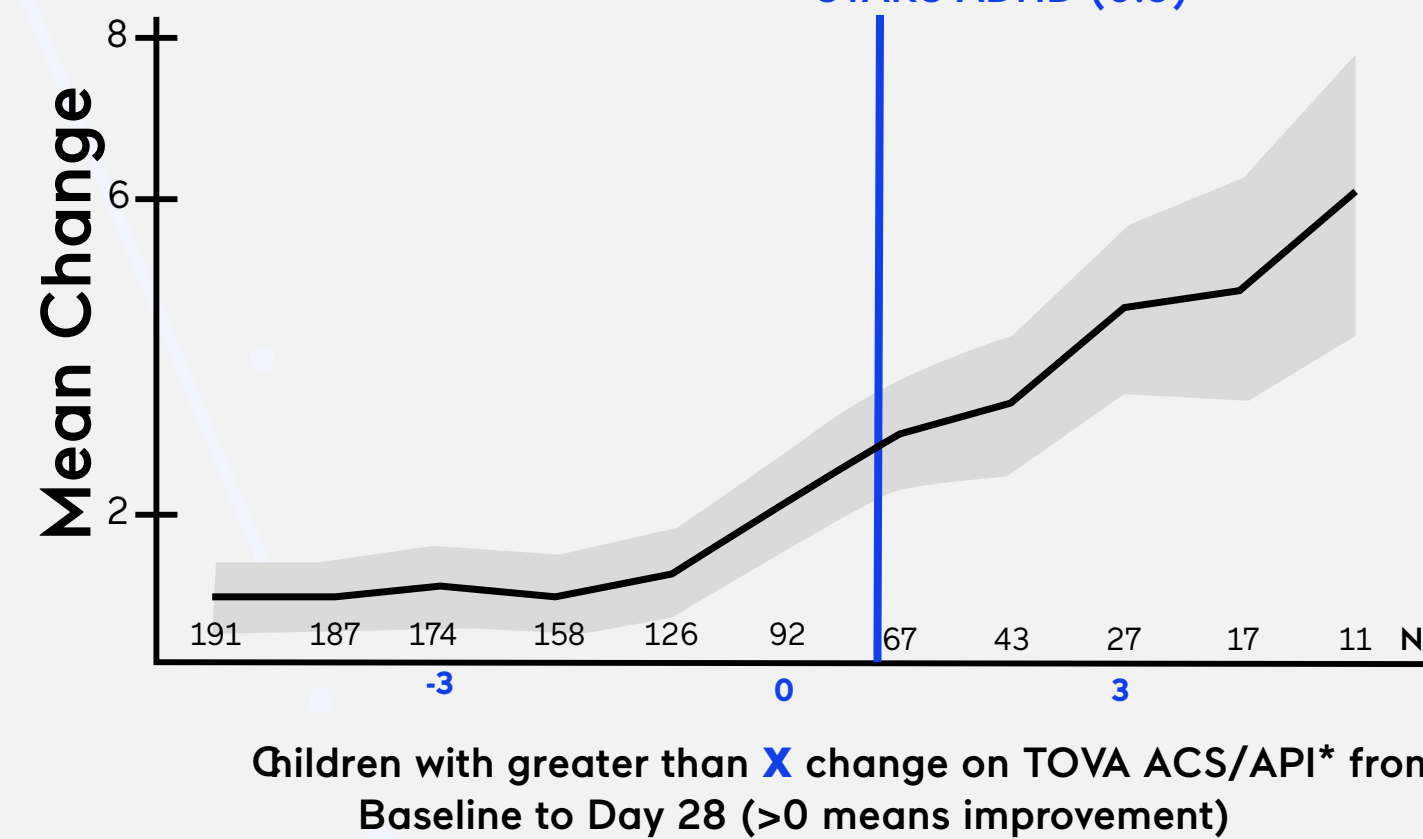
RESULTS

Children who improved in TOVA ACS/API* also showed improvement in Academic Performance Measures after 1-month of AKL-T01.

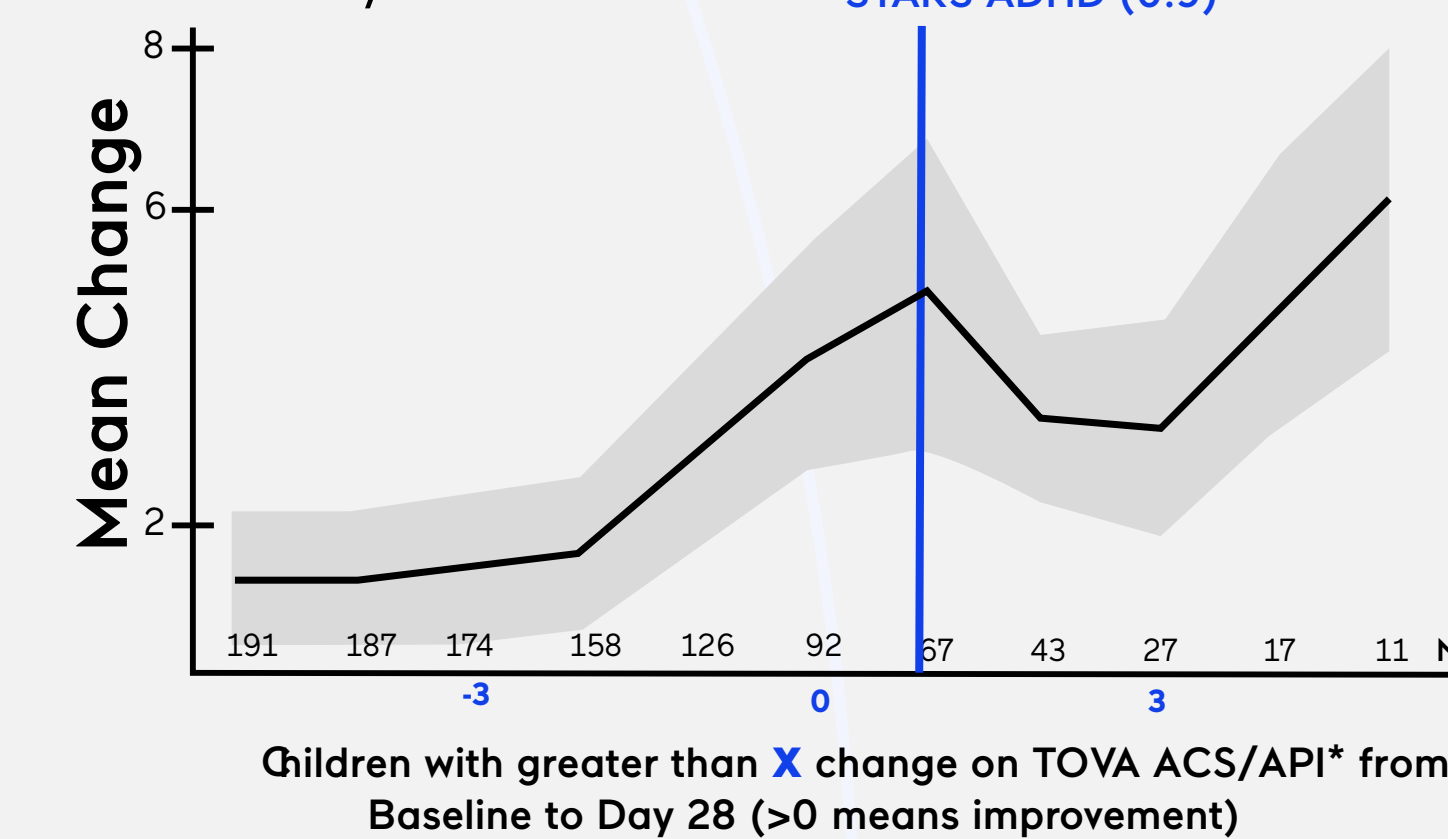
TOVA ACS/API* and Academic Performance Measures were significantly and consistently correlated at all timepoints.



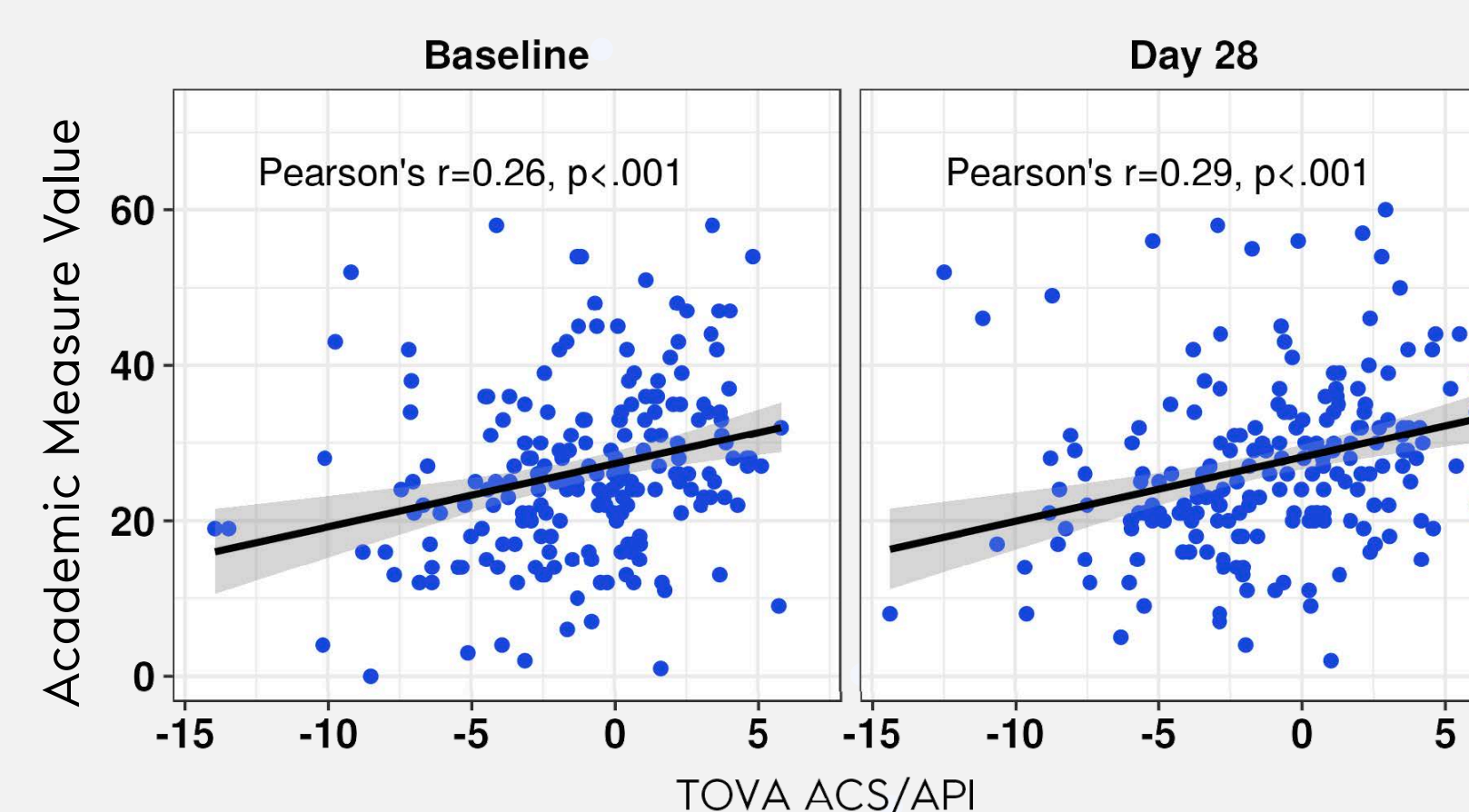
TOSREC Improvement Baseline to Day 28



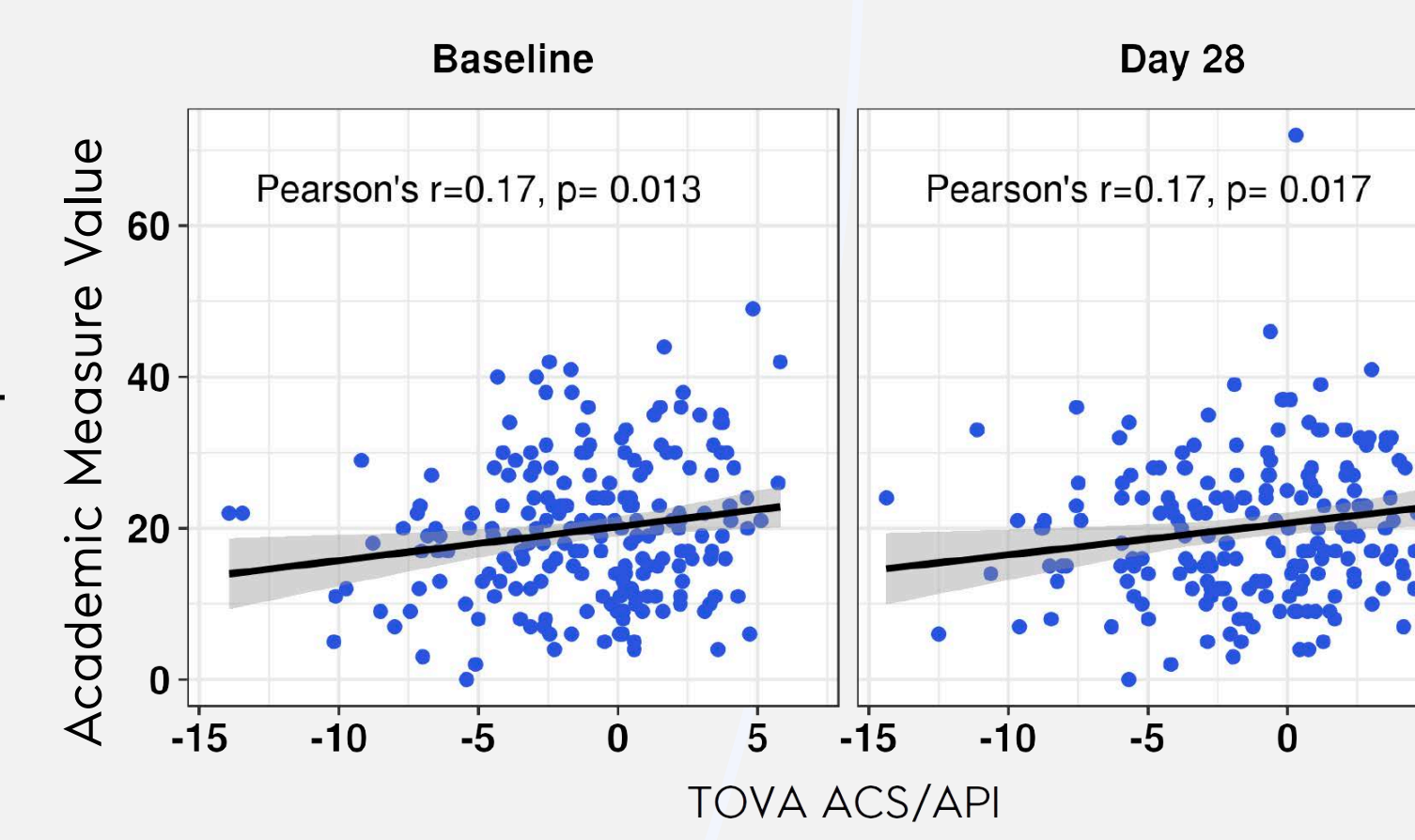
MFaCTS Improvement Baseline to Day 28



TOSREC

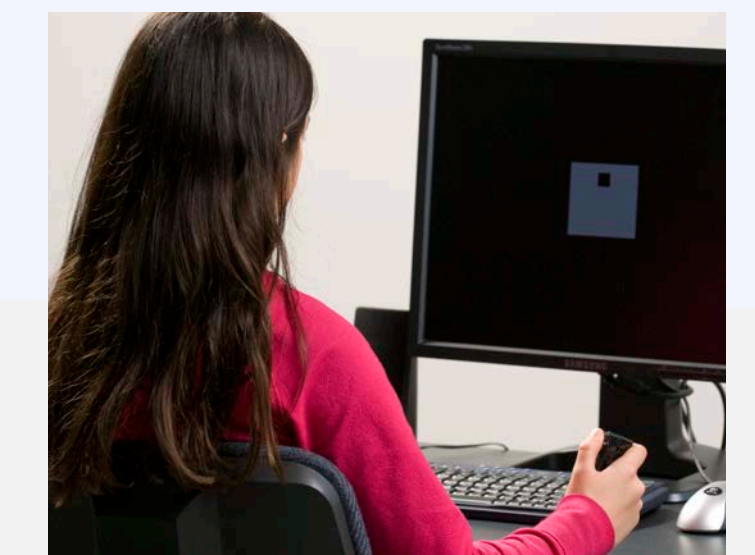


MFaCTS



CONCLUSIONS

- Findings support the clinical meaningfulness of TOVA
- Gains in TOVA attention functioning with AKL-T01 have the potential to impact children's academic functioning.



REFERENCES

- Kollins et al., A Novel Digital Intervention for Actively Reducing Severity of Pediatric ADHD (STARS-ADHD): A Randomised Controlled Trial, The Lancet Digital Health 2, no. 4 (April 1, 2020): e168-78.
- Wagner et al., TOSREC: Test of Silent Reading Efficiency and Comprehension (Pro-Ed, 2010).
- Reynolds et al., Mathematics Fluency and Calculation Tests Elementary and Secondary (Austin, TX: PRO-ED., 2015).

DISCLOSURES

ND: received research support from Akili interactive
 JL: is employed at Akili interactive and may own stock options
 SHK: is consultant, received research support and may own stock options at Akili interactive