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## Background

- Children with ASD demonstrate early challenges with joint attention<sup>1</sup>, including initiating episodes of joint attention (IJA).
- IJA predicts variation in later productive language measures, like verb diversity (i.e., number of different verbs produced).<sup>2</sup>
- Productive verb diversity in childhood predicts adult language outcomes in ASD.<sup>3</sup>
- But, do we see a link between IJA and production of verbs in *subcategories*?
  - Action (e.g., eat, run)
  - General all-purpose (GAP; e.g., want, go)<sup>5</sup>
  - Internal state (e.g., think, hope)

Does the presence or duration of IJA predict production of action, GAP, and/or internal state verbs?

## Methods

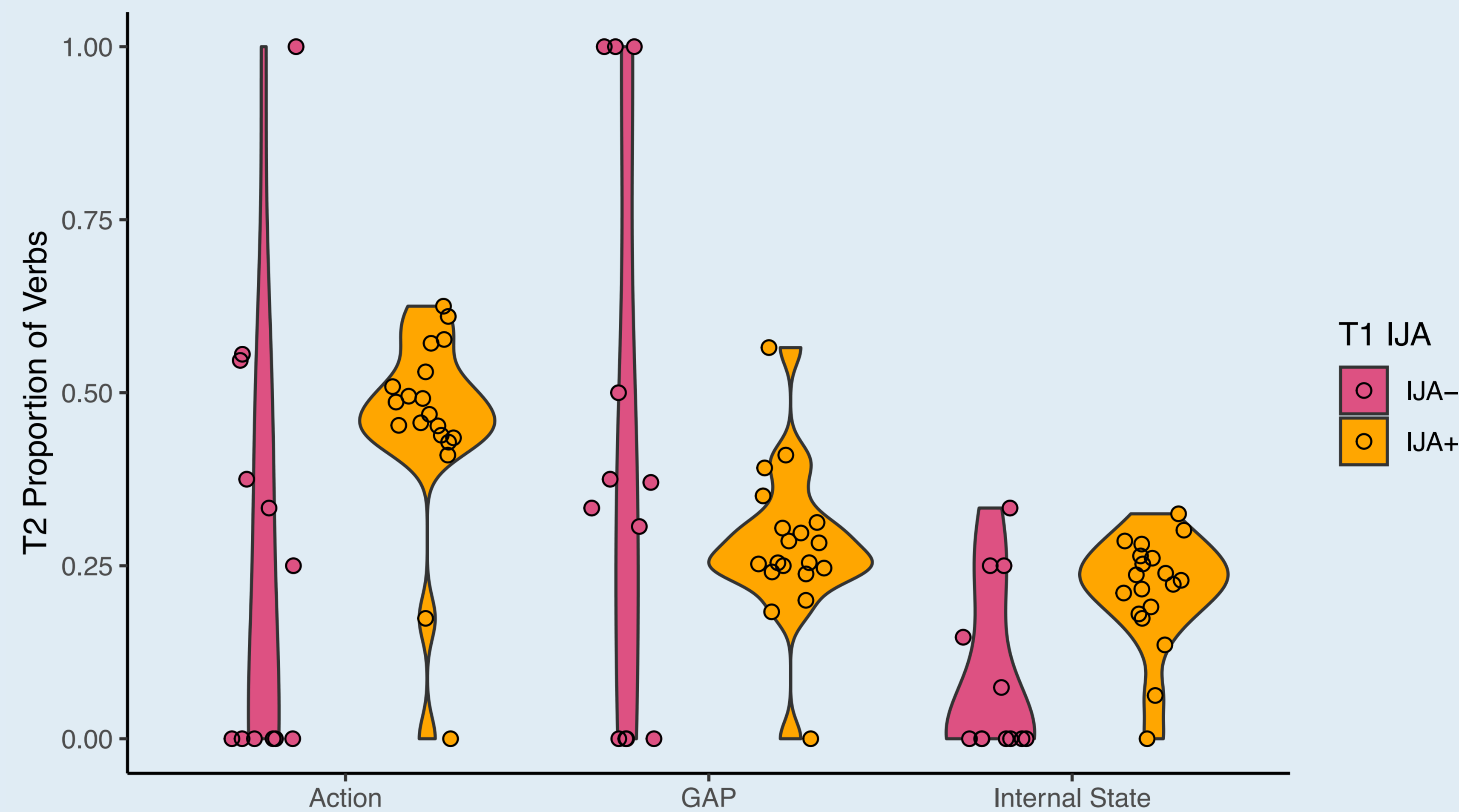
- 31 children with ASD (from a longitudinal project<sup>4</sup>)
- Language samples from six parent-child play sessions, each four months apart
- Presence and duration of IJA episodes were coded at visits 1-3 (T1)
- Verbs produced during visits 4-6 (T2) were coded as action, GAP, or internal state

IJA+ group had higher T1 language and communication scores.

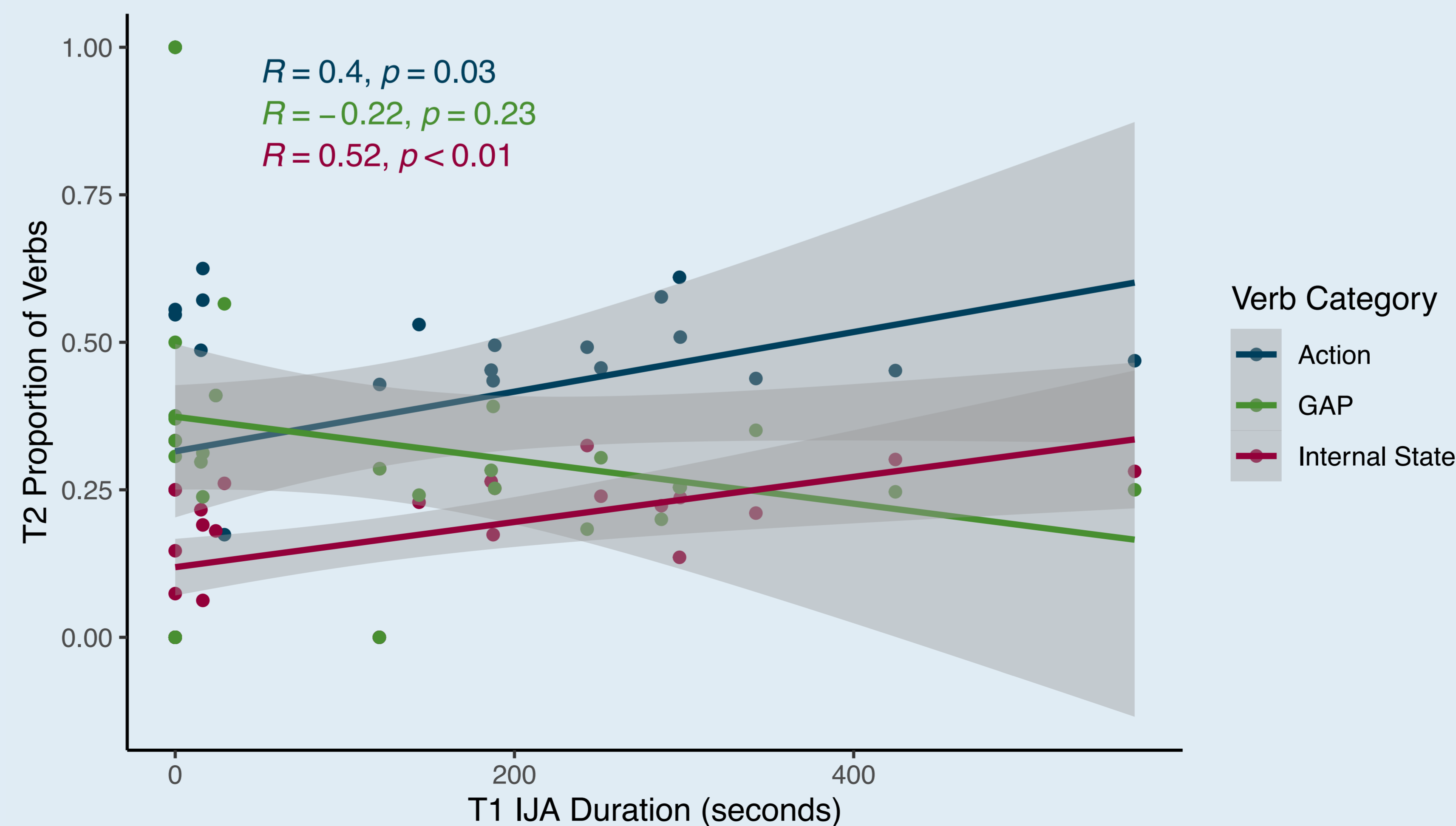
|               | Age in months | MSEL Expressive Language Raw Score | MSEL Receptive Language Raw Score | Vineland Communication Total | ADOS Total   |
|---------------|---------------|------------------------------------|-----------------------------------|------------------------------|--------------|
| IJA+ (n = 19) | 33.06 (6.06)  | 21.05 (6.88)                       | 26.42 (7.97)                      | 82.68 (17.46)                | 11.84 (3.27) |
| IJA- (n = 12) | 32.59 (4.70)  | 12.67 (4.70)                       | 13.92 (5.00)                      | 65.08 (8.55)                 | 16.42 (3.45) |
| <i>p</i>      | .862          | <.001                              | <.001                             | <.001                        | <.001        |

## Results

IJA+ children produced a *higher proportion* of action and internal state verb types at T2 than IJA- ( $p < .05$ )



T1 duration of IJA was *positively correlated* with T2 proportion of action and internal state verb types ( $p < .05$ )



## Discussion

- Children who engage in IJA are more likely to later use action and internal state verbs than those who do not engage in IJA.
- Longer duration of IJA episodes is related to later higher proportions of action and internal state verb types.
- Episodes of IJA may be particularly conducive to learning specific types of verbs (i.e., action and internal state), possibly because:
  - Children are more interested/invested when they initiate JA
  - Parents produce richer/more varied verb input during IJA
- GAP verb analyses did not yield significant effects, but the patterns were opposite those seen of action and internal state verbs.
- Lack of significance in GAP verb analyses is likely related to the extreme variability in GAP verb proportions in the IJA- group.
- Data are currently being recoded with a focus on context of use.
- Future work should investigate how parent talk during IJA relates to children's production of verbs within subcategories, and whether this production within subcategories predicts later language skills.

## References & Acknowledgements

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