

### Background

- Language outcomes for deaf children are notoriously difficult to predict <sup>1 2 3</sup>
  - For deaf children learning spoken language, interventions can help
    - Ex: early intervention, early access to language, hearing aids / cochlear implants <sup>4 5</sup>
    - Very little is known about the effects of these on sign language outcomes
  - Children's learning environments vary widely <sup>6 7</sup>
    - Ex: parent ASL skill, amount of language access through vision / hearing

**Do the relationships between intervention choices and sign vocabulary differ based on children's early life experiences?**

### Method

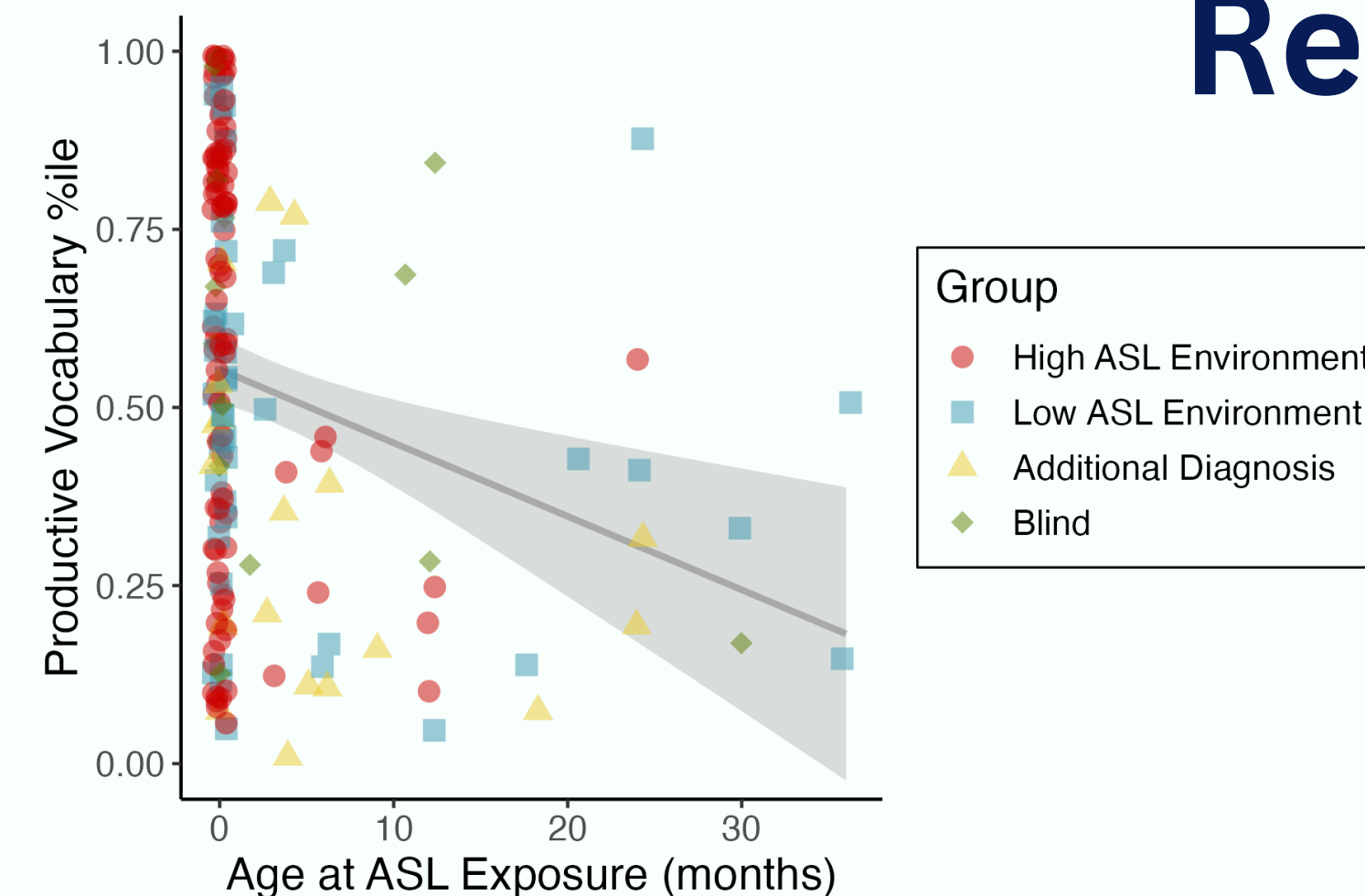
- **171 deaf children** (0-5yrs; M: 2.5) learning American Sign Language
- Parents completed ASL-adapted MacArthur-Bates Communicative Development Inventory: reporting which signs their child produces
  - This is converted into ASL vocabulary percentile
- Using demographic information, participants split into 4 groups:
  - High ASL environment
  - Low ASL environment
  - DeafBlind
  - DeafDisabled



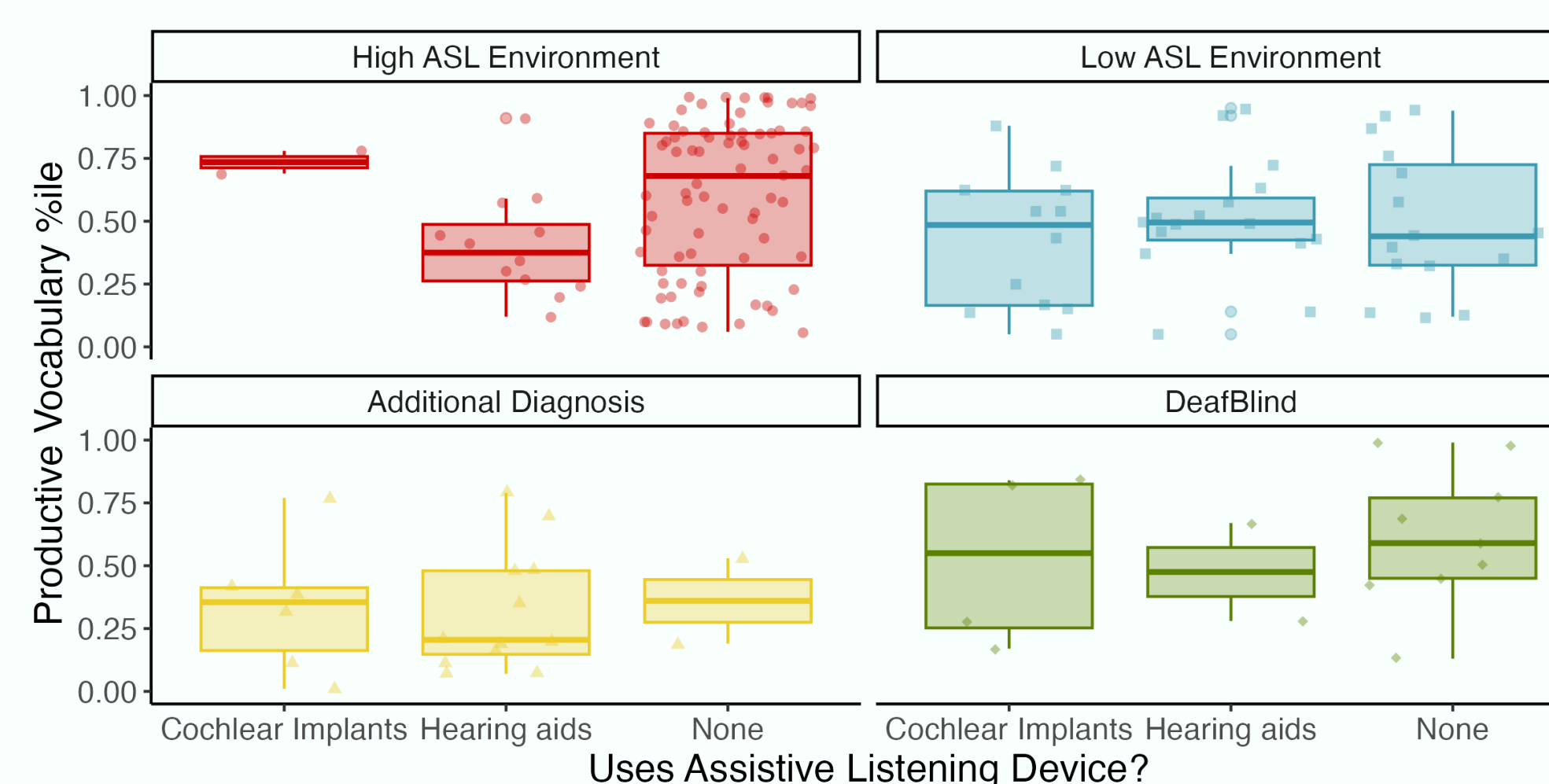
(Show English)

- Child doesn't know
- Child understands
- Child understands and signs
- We use a different sign
- Skip/I don't know

### Results

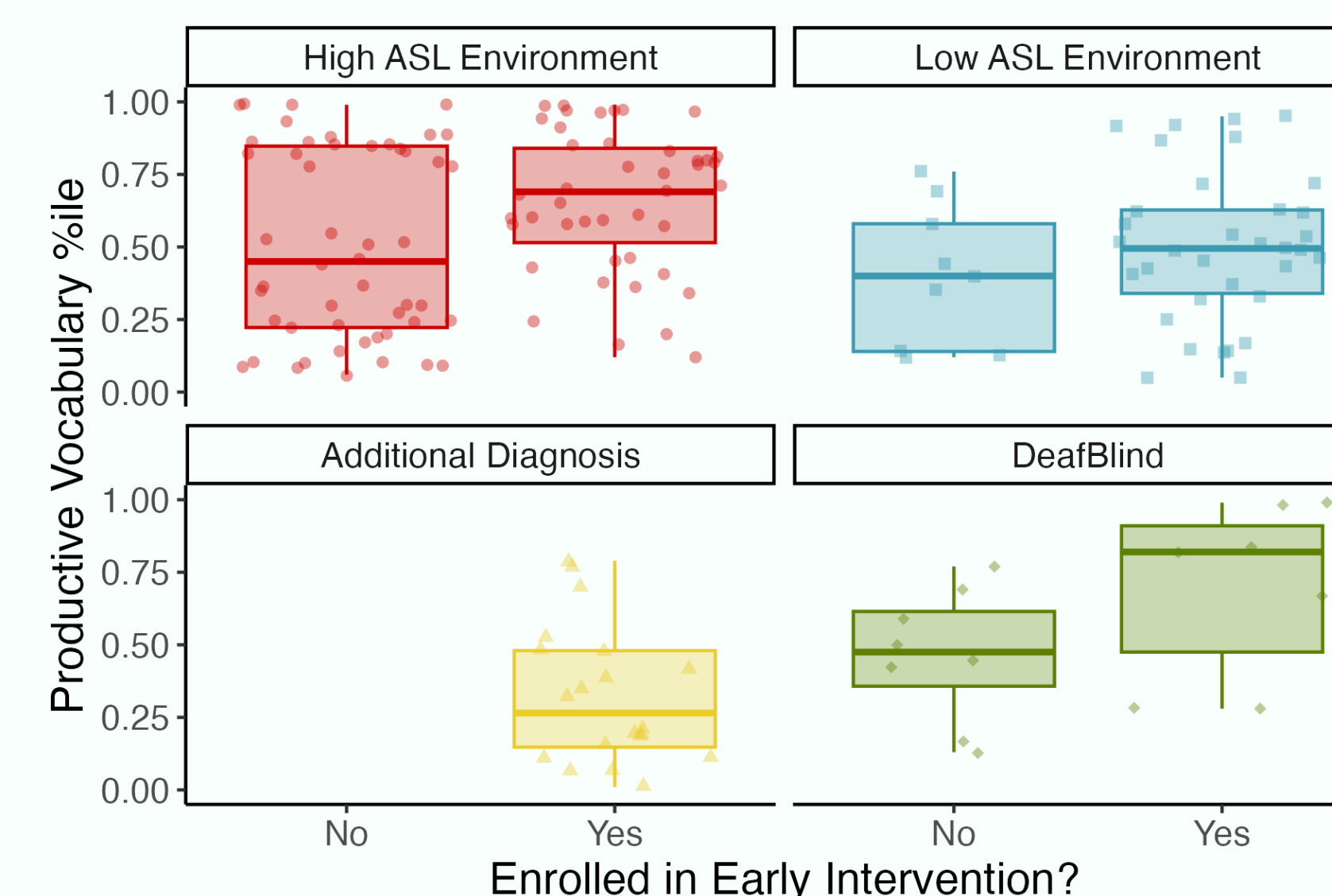


- For all groups, enrollment in early intervention associated with higher sign vocabulary

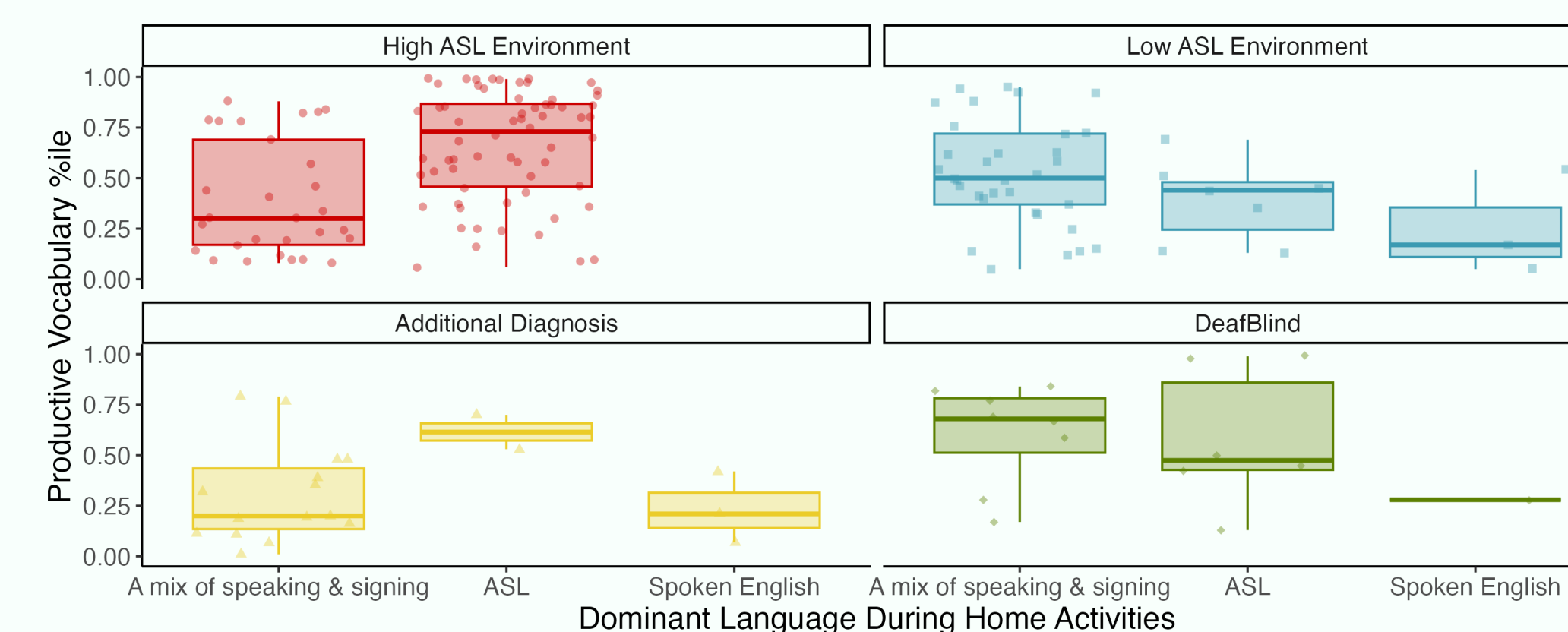


- Using ASL during family activities associated with higher sign vocab
  - Except for DeafBlind group: mix of spoken/signing associated with higher vocab

- For all children, earlier exposure to sign language is associated with higher sign vocabulary



- Across groups, no difference between CI use and no assistive listening device
  - For some groups, hearing aids associated with lower ASL vocabulary



### Take-aways & Recommendations

- Early intervention and early language exposure provide consistent benefits for deaf children's spoken *and* sign language development
  - For children in low-ASL environments, sign language support should focus on getting children early access
- Providing accessible language input during home activities is associated with larger vocabulary