The Influence of Shyness on Language Assessments

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Introduction

Background

- Children's accuracy on language assessments depends on their language knowledge, temperament, and the social requirements of the assessment
- Shy children tend to score lower on receptive and expressive language tasks compared to non-shy children (Spere et al, 2004)
- In an experimental setting, shy children are less likely identify to the correct novel object compared to non-shy children (Hilton & Westermann, 2017)

Research Questions

Research is unclear if the language disparity in shy children results from the socially demanding circumstances of the language assessment or from poor language skills.

Does shyness affect children's performance on language tasks which differ in the degree of social interaction required?

Methods

Participants

- 121 participants
- 63 females, 58 males
- Mean age: 28;12

- Average income: $75,000
- Average parent education: 2-4 year college degree
- Participants were separated into a shy and non-shy group based on a median split of shyness score (median = 3.75)

Race of participants
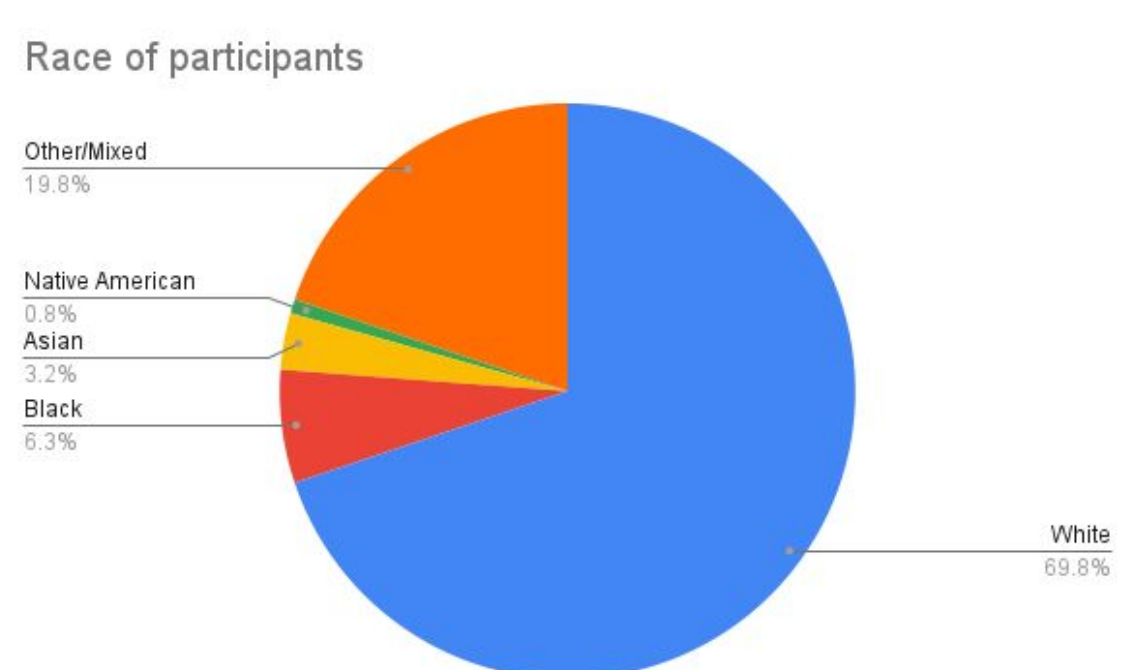
Forms

Early Childhood Behavior Questionnaire: Short form (ECBQ; Putnam et al 2010)

Mac-Arthur Bates Communicative Development Inventory (MBCDI; Fenson et al. 1994)

Procedure

All the following procedures were conducted via Zoom.

Production Task

- The experimenter directs the child to verbally name objects presented on the screen
- "What is this?"

Pointing Task

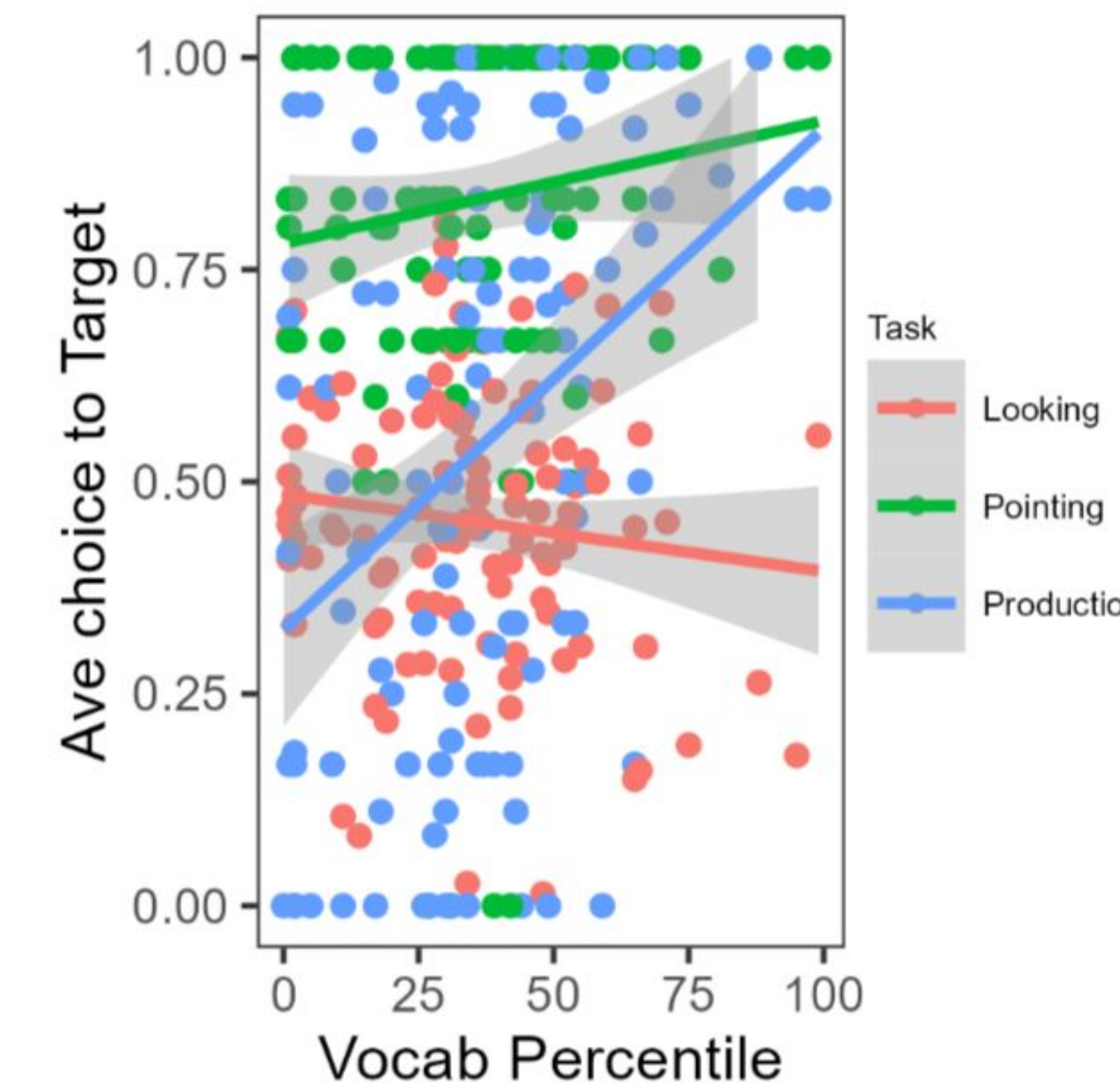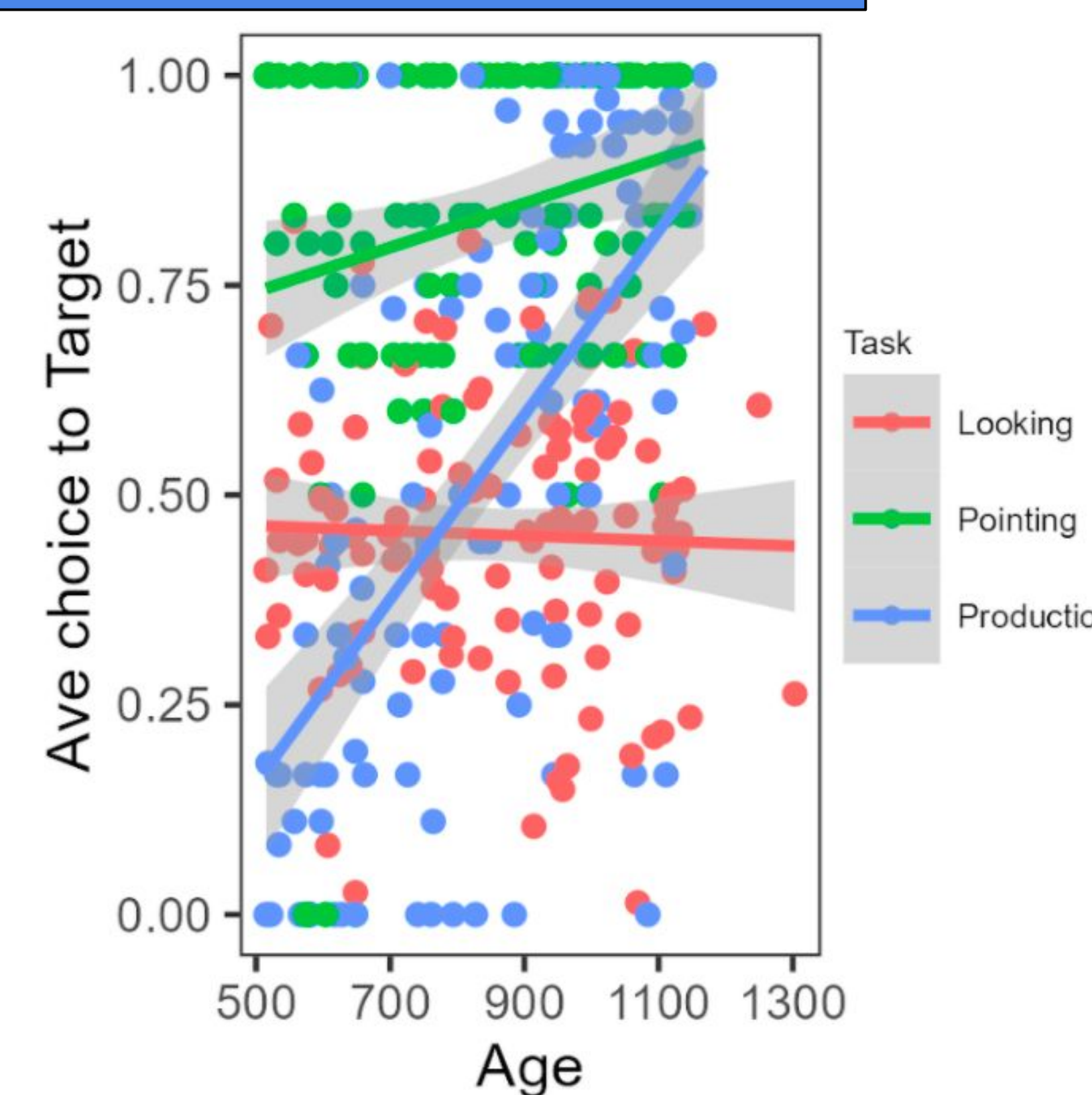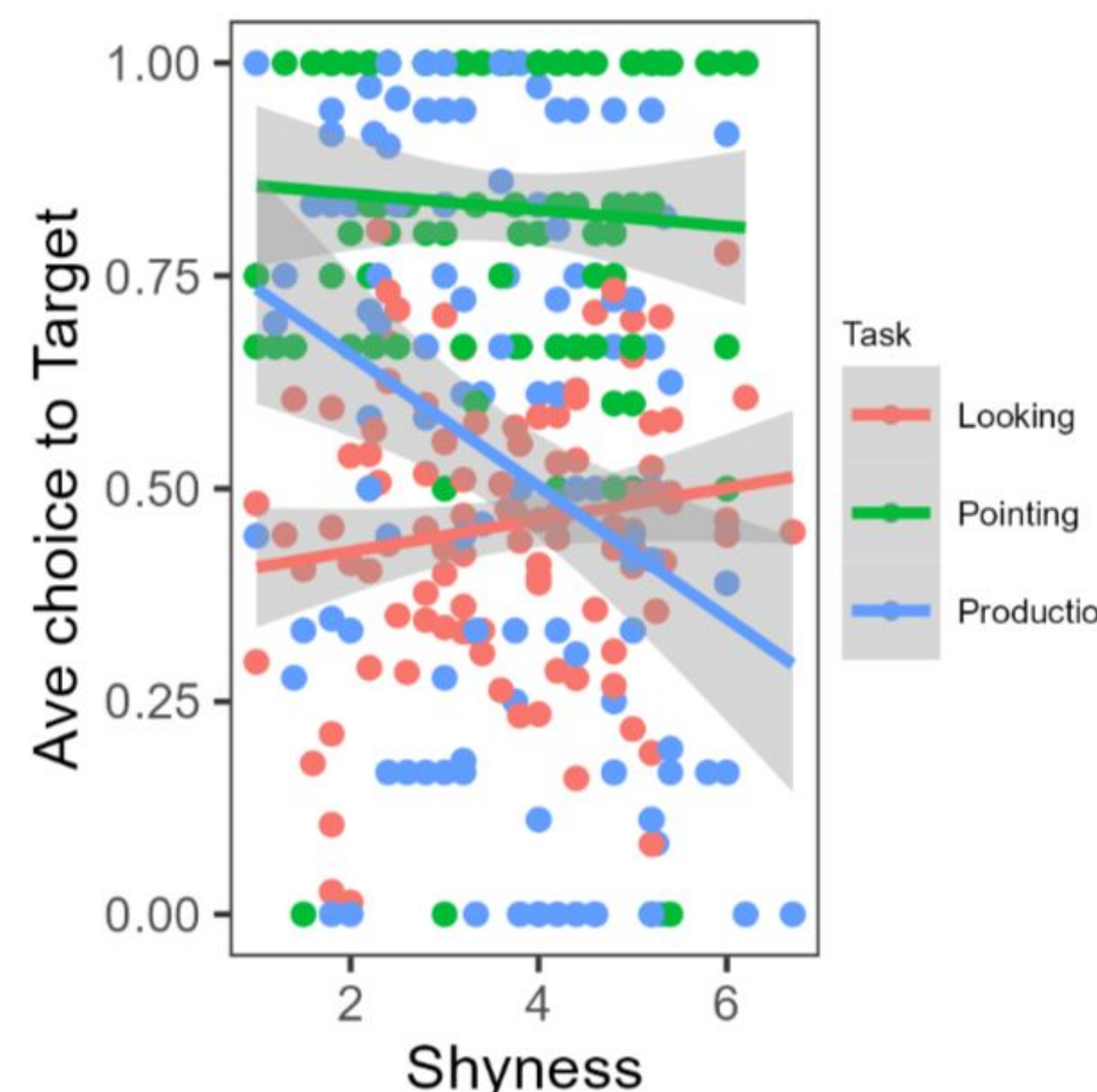- The experimenter directs the child to point at one of two objects on the screen
- "Point to the shoe!"

Looking Task

- The experimenter directs the child to look at the correct object on the screen
- "Look at the shoe!"

Results

- A linear mixed model regression was used to assess trial-by-trial accuracy
- Across all three tasks, there were significant effects of task (x^2=204.63, p<.001), age (x^2=48.80, p<.001), and vocabulary (x^2=17.41, p<.001)

- There were significant interactions of: shyness and task (x^2=13.29, p=.001), task and age (x^2=115.26, p<.001), task and vocab (x^2=43.39, p<.001), and a three-way interaction of shyness, task, and age (x^2=10.79, p=.005).

Results - Production
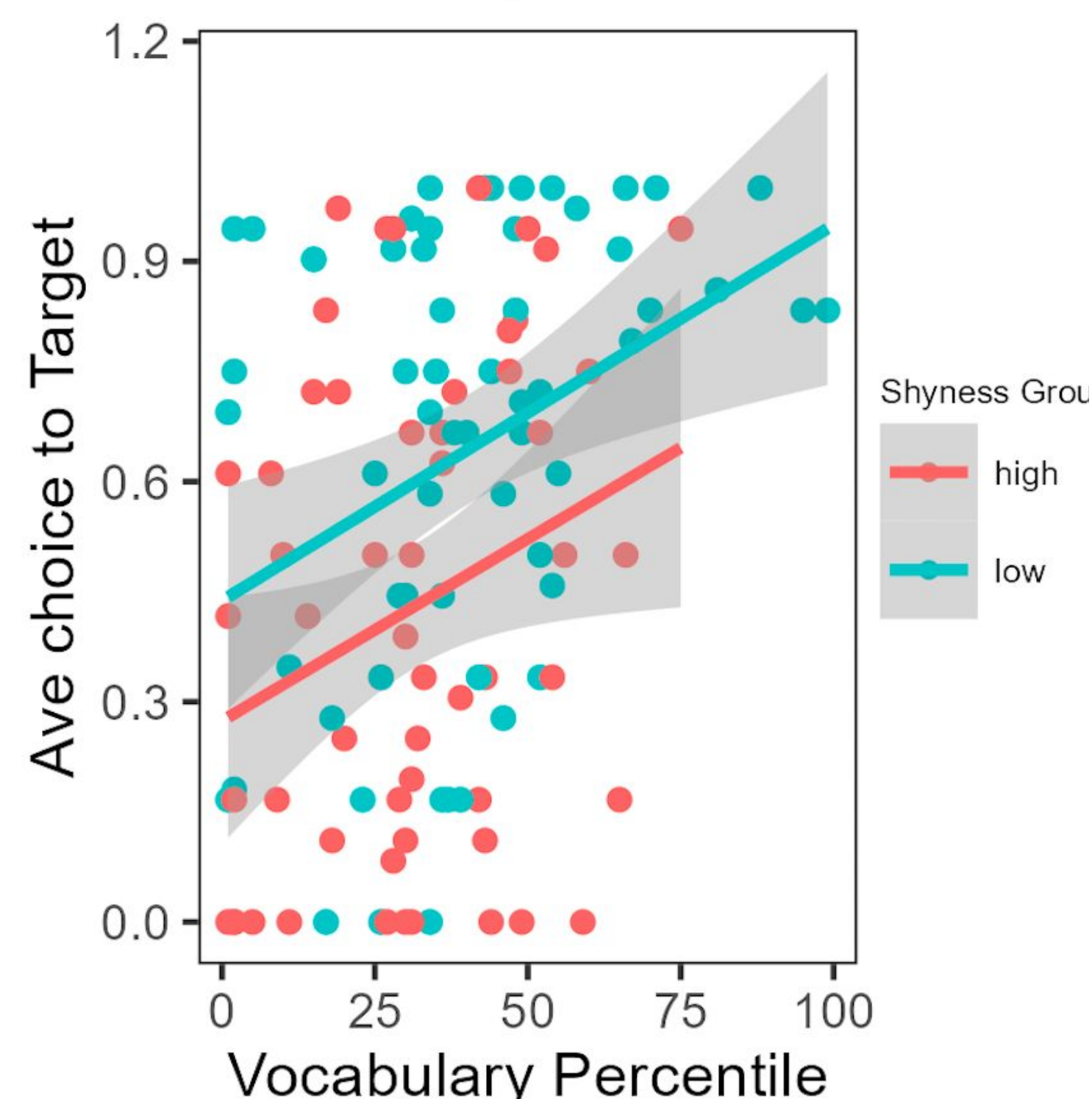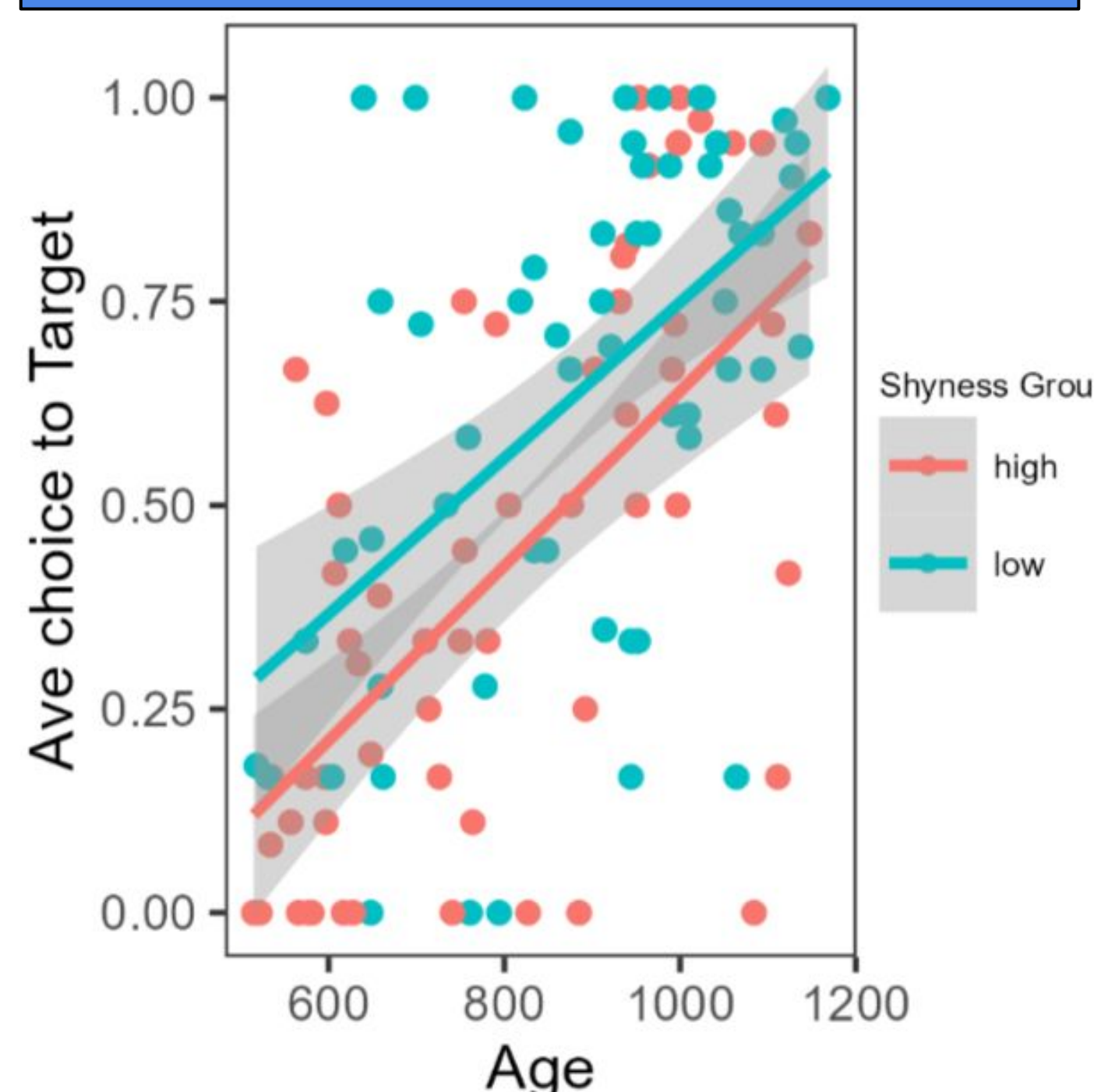
- Significant main effect of age (β=1.92, p<.001), vocabulary percentile (β=1.10, p<.001) and shyness (β=-5.23, p=.03), but no interaction
  - As children get older, they get better at naming items
  - As vocab increased, they get better at naming items
 - Shy children are worse at this task

Results - Looking
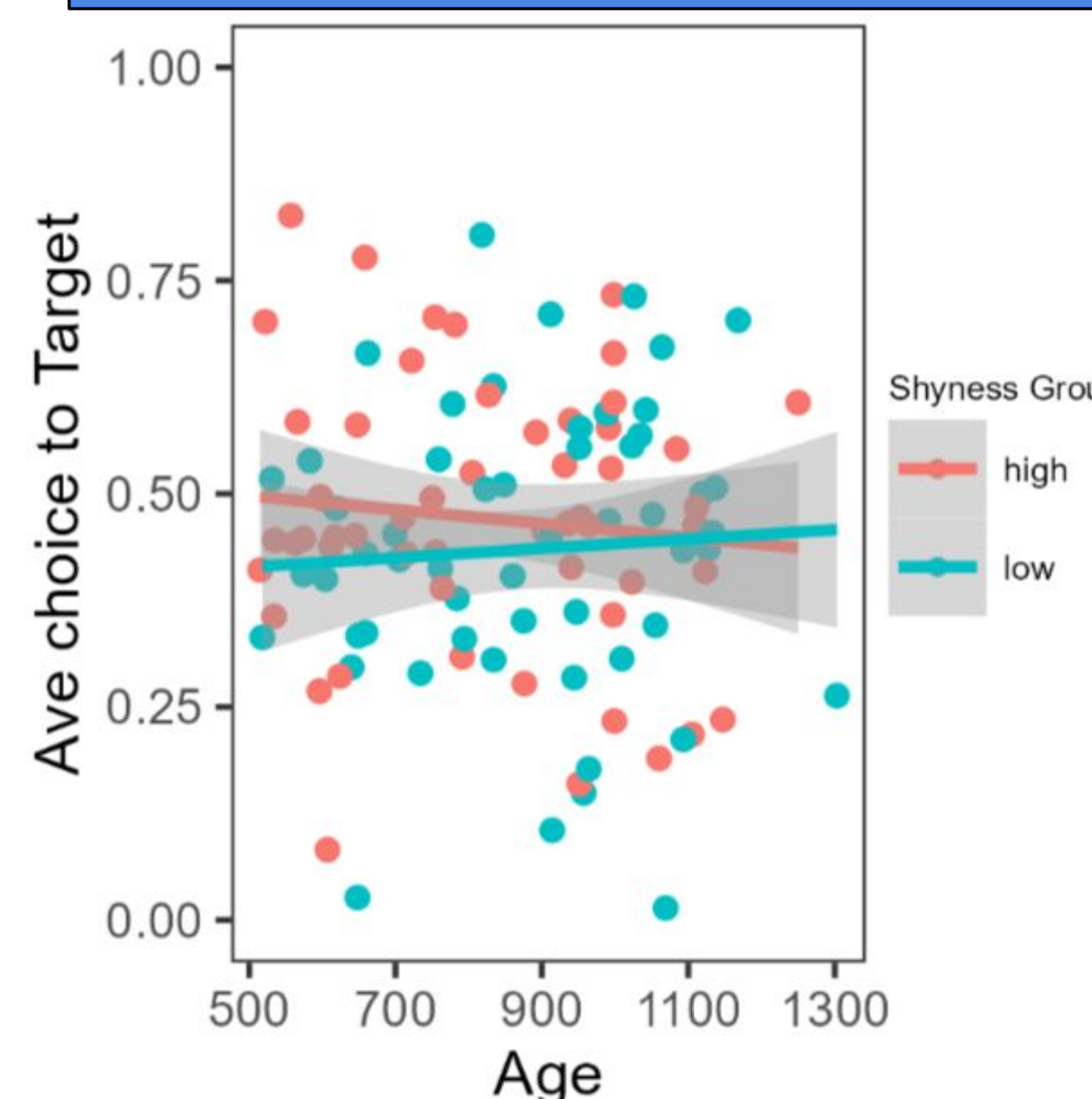
- No significant effect; participants were bad at looking regardless of age, vocab, or shyness.
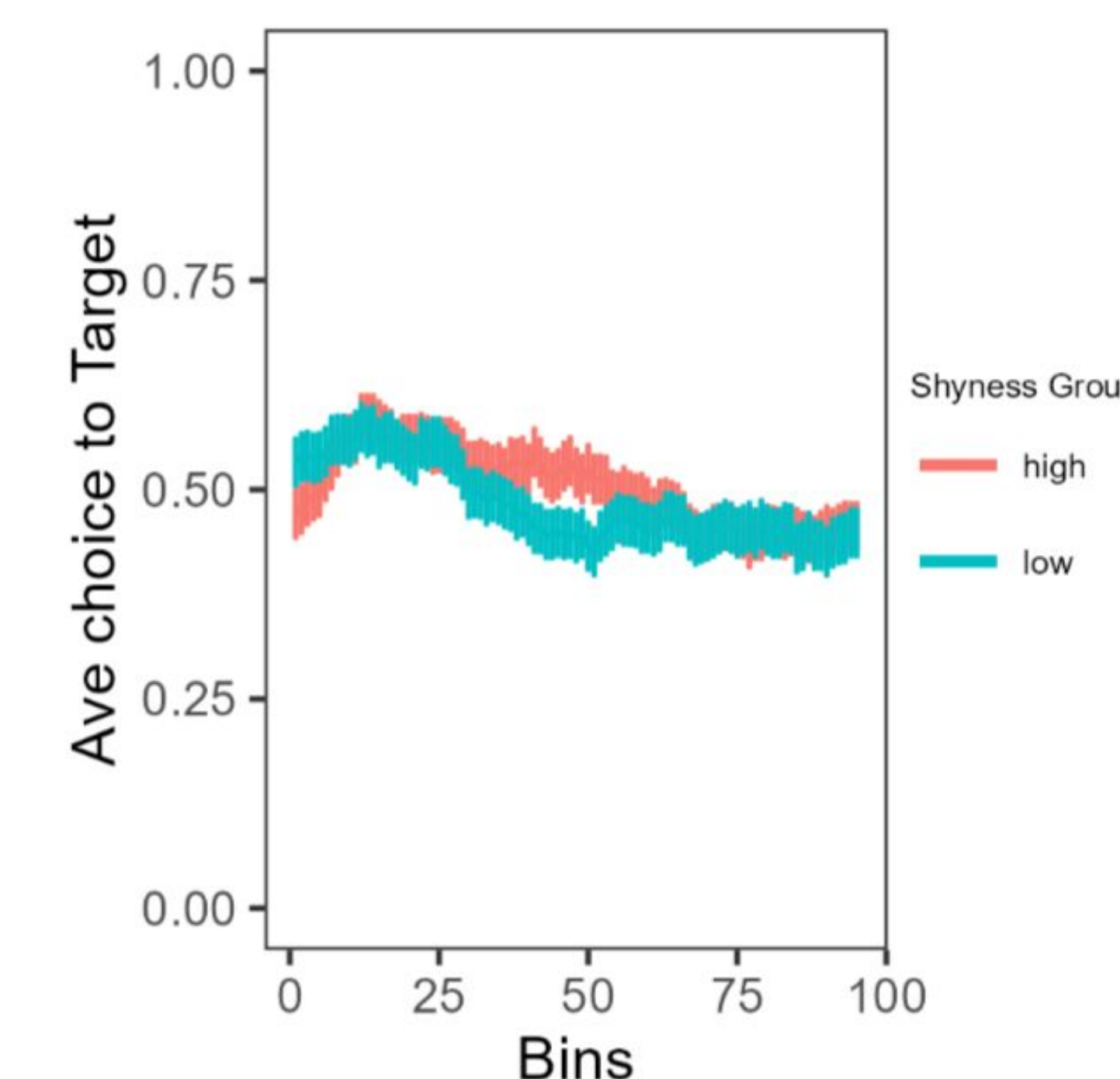
- Significant main effects of time bin (β=-.18, p<.001) and trial number (β=.043, p<.001)
  - Participants were better at the looking task for the earlier bins compared to the later bins
  - Some trials were better than others

Results - Pointing
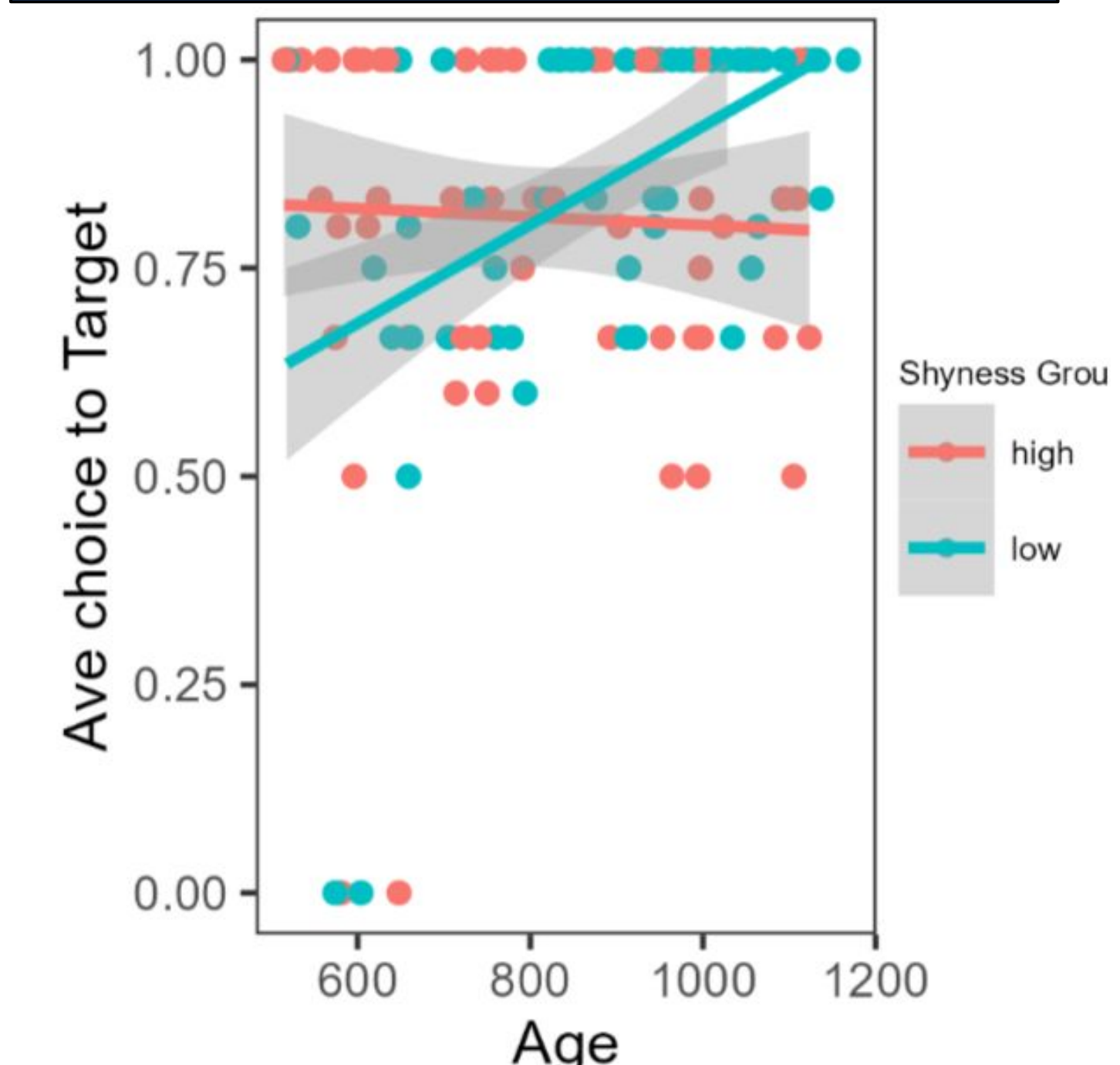
- Significant effect of age (β=.37, p=.01), vocabulary percentile (β=.33, p=.02), and an interaction of shyness and age (β=-.54, p=.001).
  - The non-shy group improved more with age

Conclusion

This study is a small component of understanding how shyness affects children's ability to perform on language assessment tasks.

Our results indicate:

- Shy children have much greater difficulty on production tasks than non-shy children
- All participants struggled with looking tasks, which may have been too easy for them
- Non-shy children significantly increased their performance on pointing the older they were

Altogether, there are significant differences in how shy children and non-shy children respond to different types of language tasks. As a result, speech pathologists, psychologists, and researchers might take this variation into account when assessing children's language.