

Introduction

Background

A key component of children's development is language growth. Research suggests that temperament can influence language development.

- Extroverted personality types predicts stronger language skills from toddlerhood to middle childhood (Slomkowski et al, 1992)
- Shy children scored lower on receptive and expressive language tasks compared to non-shy children (Spere et al, 2004)
- In an experimental setting, shy children were less likely identify to the correct novel object compared to non-shy children (Hilton & Westermann, 2017)

A variety of tasks can be used to test language development, ranging from simple comprehension looking tasks to verbal production tasks. The validity of these tests is critical for an accurate assessment of a child's language ability. Could the effectiveness of different testing be influenced by a child's temperament?

Objectives

To measure if shyness affects children's performance on language tasks differing in degrees of social interaction.

Methods

Children Participants:

White: 87.9%	Black: 3.0%	Asian: 6.1%	American Indian: 3.0%
Males: 50%	Females: 50%		

Parent Participants:

Doctoral/ Masters: 29.5%	4-year degree: 35.3%	Attended some college/trade school: 29.4%	High school diploma: 5.9%
Married: 85.3%	Single: 8.8%	Divorced: 2.9%	Other: 2.9%

Participants

- 34 children, ages 17-to-37 months and their primary caregivers
- Primarily monolingual English speakers
- Recruited online
- Primarily from OK

Forms

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

- Parent-report, measures child's temperament

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

- Either the MBCDI: Words & Sentences, or MBCDI: III were used based on the child's age
- Parent-report, measures children's productive vocabulary

Liesl Melnick & Dr. Sarah Kucker

Oklahoma State University

Methods continued

Procedure

All the following procedures were conducted via Zoom

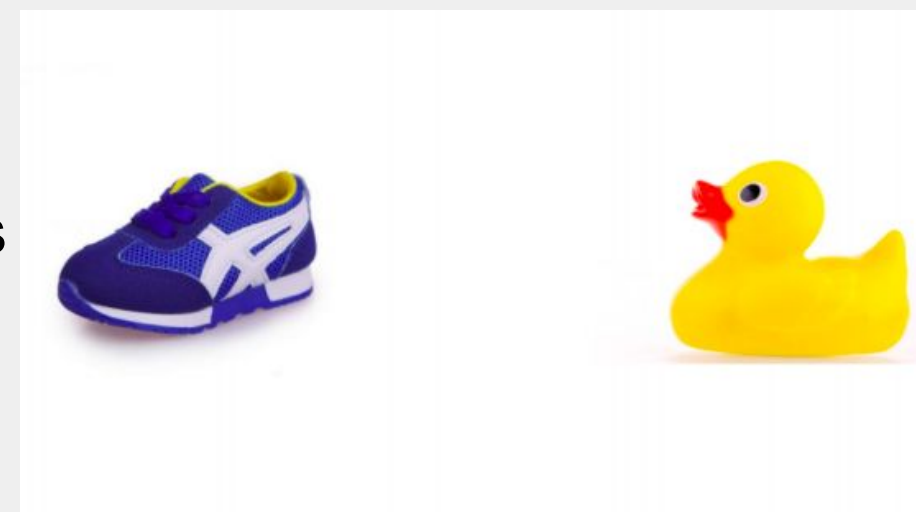
Production Task

- 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
- "Where is the shoe?"

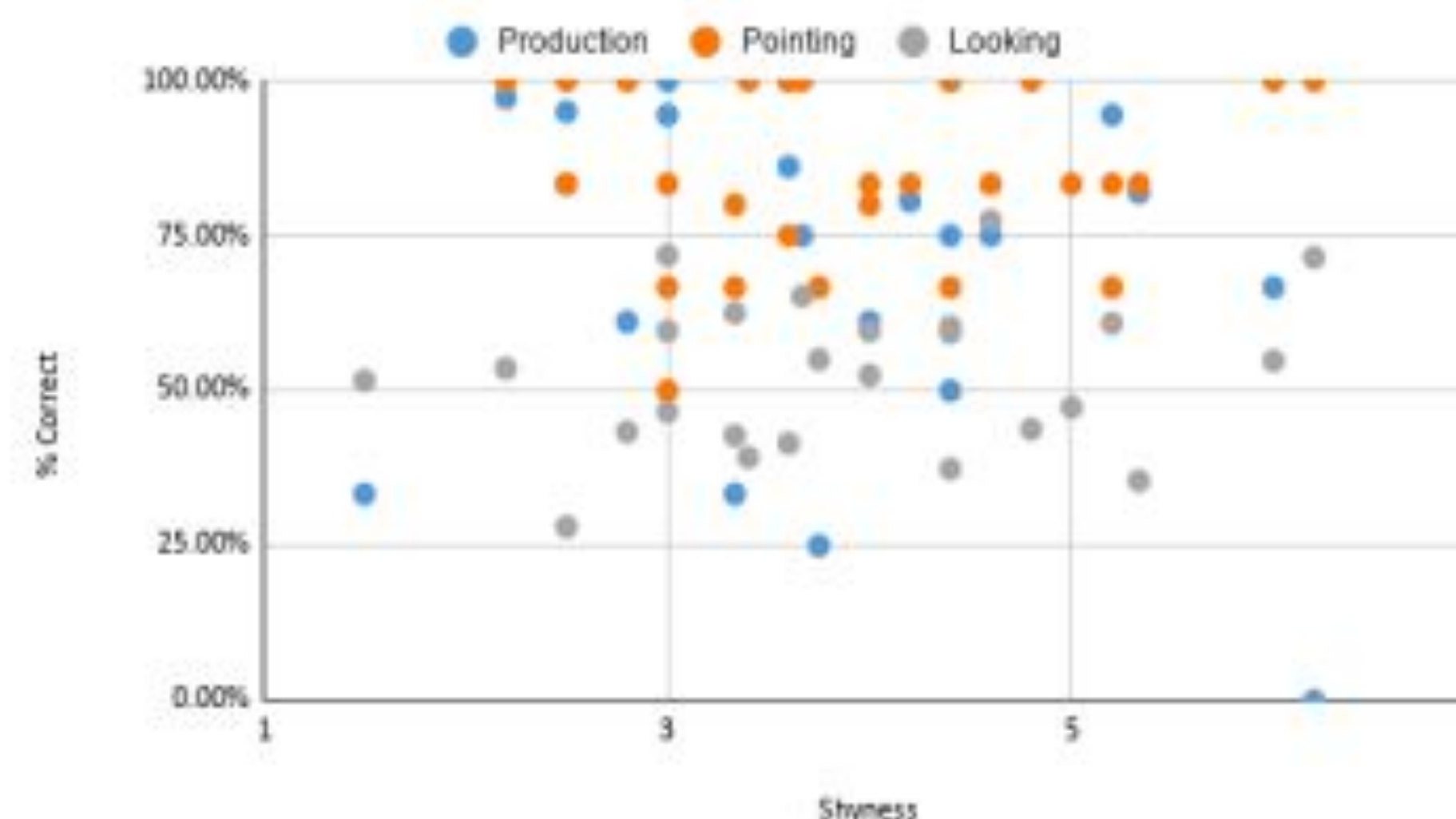


Preferential Looking Task

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

Results

Correlational analyses between shyness and accuracy on tasks



Results continued

Three correlations were ran between the % accuracy across all tasks and children's level of shyness. For the looking task, the percent of time that children looked at the target stimuli was calculated and then used in the analysis.

- Shyness was not related to performance on the production task, $r(23)=-.206, p=.346$
- Shyness was not related to performance on the pointing task, $r(28)=.128, p=.516$
- Shyness was not related to performance on the looking task, $r(25)=.080, p=.702$

Discussion

- These preliminary results suggest that for the three tasks administered, shyness had no effect on the children's accuracy on each task. Since these are preliminary results, a mixed regression model will still be performed to validate these results. Since the children in this study were in a wide age range, this future analysis will control for age and vocabulary ability.
- Since the study was conducted via Zoom, the children were in the comfort of their own homes and often sitting on their mother's laps. Due to the online format, the tasks were not very interactive and therefore could have been less challenging for shy children compared to in-person tasks. In the future, the study could be administered in the lab face-to-face with the child and researcher.
- In the future, another variable that could be measured in an in-person study is if shy children perform better on tasks with 3D stimuli versus 2D stimuli (pictures of toys). Since 2D stimuli are less interactive, it would be interesting to see if shy children performed better using 2D or 3D stimuli.

References

- Fenson, L., Dale, P., Reznick, J., Bates, E., Thal, D., Pethick, S., . . . Stiles, J. (1994). Variability in early communicative development. *Monographs of the Society for Research in Child Development*, 59(5), 1-185.
- Hilton, M., & Westermann, G. (2017). The effect of shyness on children's formation and retention of novel word-object mappings. *Journal of Child Language*, 44(6), 1394-1412. <https://doi.org/10.1017/S030500091600057X>
- Putnam, S. P., Jacobs, J., Gartstein, M. A., & Rothbart, M. K. (2010, March). Development and assessment of short and very short forms of the Early Childhood Behavior Questionnaire. Poster presented at International Conference on Infant Studies, Baltimore, MD.
- Slomkowski, C., Nelson, K., Dunn, J., & Plomin, R. (1992). Temperament and Language: Relations From Toddlerhood to Middle Childhood. *Developmental Psychology*, 28(6), 1090-1095. <https://doi.org/10.1037/0012-1649.28.6.1090>
- Spere, K., Schmidt, L., Theall-Honey, L., & Martin-Chang, S. (2004). Expressive and receptive language skills of temperamentally shy preschoolers. *Infant and Child Development*, 13(2), 123-133. <https://doi.org/10.1002/icd.345>