

# It's not all about income:

Similarities and differences in children's early language environments predict vocabulary development



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## INTRODUCTION

Hirsh-Pasek et al. (2015) suggests that quality of parent-child interactions account for children's language outcomes better than quantity for low income children?

Does this relationship hold across the economic spectrum?

Differences in language environment by SES

- Quantity often defined as number of words child hears<sup>1-2</sup>
- Quality defined many ways
  - High-quality language input<sup>1,3-4</sup>
  - Parent-child interaction<sup>5-7</sup>

# Defining Quality: Communication Foundation<sup>7-8</sup>

Symbol-Infused Joint Engagement (JE) –
shared attention with language or gestures
Routines & Rituals - scripted, coordinated
activities

Fluency & Connectedness - smooth, balanced communication

Is this true across SES strata?

# RESEARCH QUESTIONS

Across language-equated income groups:

- 1. Does the amount of talk vary?
- 2. Does the quality of the communication foundation vary?
- 3. Does the communication foundation relate to language development?

# SAMPLE

- 180 children: NICHD-Study of Early Childcare and Youth Development
- Three income groups matched on expressive language at age 3

# METHODS

24-months: coded for quantity and quality of language interaction during play session (3-box task)

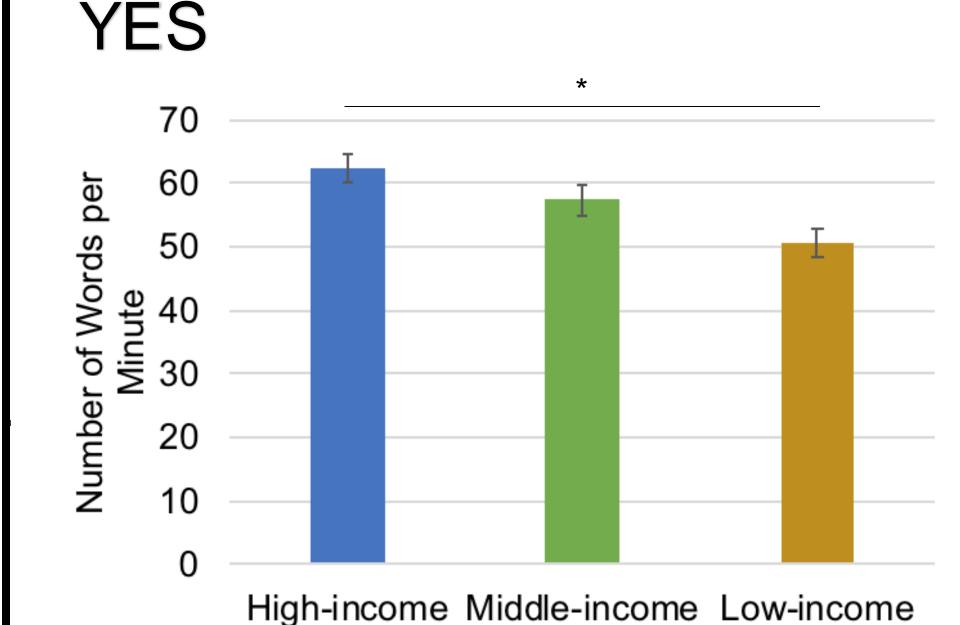
- Quantity: maternal words per minute
- Quality: The communication foundation<sup>8</sup>: Symbol-Infused JE, Routines & Rituals, Fluency & Connectedness

36-months: Expressive Language - Reynell Developmental Language Scales<sup>9</sup>

#### RESULTS

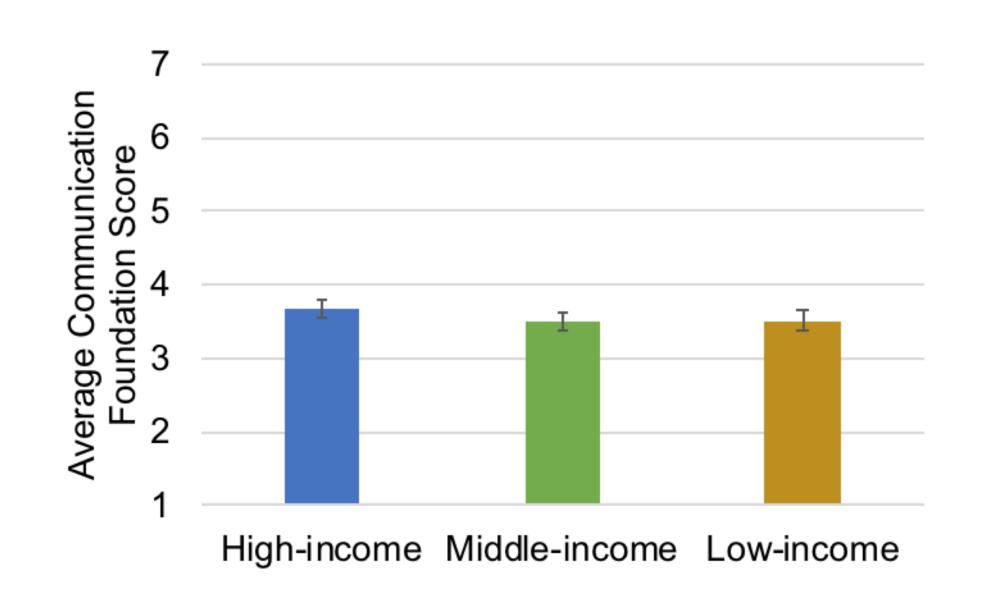
# Does the amount of talk vary by income group?





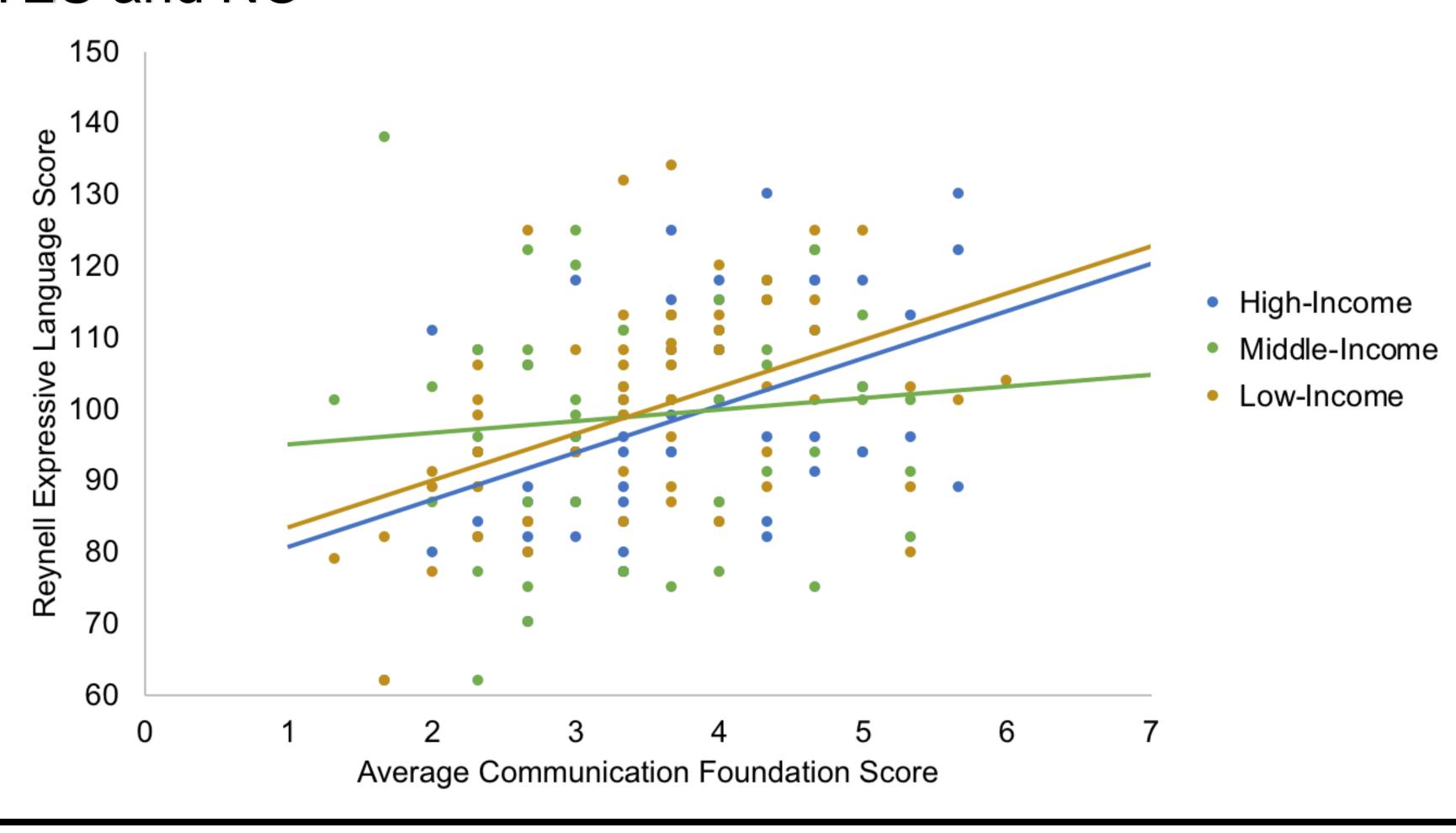
# Does the quality of the communication foundation vary by income group?

# NO



# Is the communication foundation a mechanism for language development across groups?

# YES and NO



## DISCUSSION

### Conclusion

# When equated for language outcomes:

- Amount of talk by parents differs across income
- The communication foundation does not

The relationship between the communication foundation and language:

- Significant for the low- and high-income
- NOT significant for the middle-income
- But, groups do not differ from each other

### *Implications*

SES-differences: Communication foundation vs. amount of talk:

- More talk isn't necessarily better
- Cultural differences result in differences in in talk?<sup>10</sup>
- High-quality interaction better target for intervention

The communication foundation as an area of intervention

- Already a part of communication in homes across SES-strata
- Strongly associated with later outcomes

## REFERENCES

- Hart, B., & Risley, R. R. (1995). *Meaningful differences in the everyday experiences of young American children* Baltimore, MD: Paul H. Brooks.

  Cartmill, E. A., Armstrong, B. F., Gleitman, L. R., Goldin-Meadow, S., Medina, T. N., & Trueswell, J. C. (2013). Quality of early parent input predicts child vocabulary 3 years later. *Proceedings of the National Academy of Sciences of the United States of America, 110*(28), 11278-11283.

  Huttenlocher, J., Waterfall, H., Vasilyeva, M., Vevea, J., & Hedges, L. V. (2010). Sources of variability in children's language growth.
- Huttenlocher, J., Waterfall, H., Vasilyeva, M., Vevea, J., & Hedges, L. V. (2010). Sources of variability in children's language growth. Cognitive Psychology, 61(4), 343–365.

  Hoff, E. (2003). The specificity of environmental influence: Socioeconomic status affects early vocabulary development via maternal
- speech. *Child Development, 74*(5), 1368–1378.

  Mistry, R. S., Biesanz, J. C., Chien, N., Howes, C., & Benner, A. D. (2008). Socioeconomic status, parental investments, and the cognitive and behavioral outcomes of low-income children from immigrant and native households. *Early Childhood Research Quarterly, 23*(2), 193-212
- Raviv, T., Kessenich, M., & Morrison, F. J. (2004). A mediational model of the association between socioeconomic status and three-year old language abilities: The role of parenting factors. *Early Childhood Research Quarterly, 19*(4), 528-547.

  Hirsh-Pasek, K., Adamson, L. B., Bakeman, R., Owen, M. T., Golinkoff, R. M., Pace, A., ... Suma, K. (2015). The contribution of early communication quality to low-income children's language success. *Psychological Science, 26*(7), 1071-1083.

  Adamson, L. B., Bakeman, R., & Suma, K. (2016). The Joint Engagement Rating Inventory (JERI). Technical Report 25. Unpublished manuscript, Department of Psychology, Georgia State University.
- Reynell, J. (1991). Reynell Developmental Language Scales (U.S. Edition). Los Angeles, CA: Western Psychological Services.

  Sperry, D. E., Sperry, L. L., & Miller, P. J. (2018). Reexamining the Verbal Environments of Children From Different Socioeconomic Backgrounds. *Child Development*.

#### ACKNOWLEDGEMENTS

Thank you to everyone at the Temple Infant & Child lab for helping us to collect this data. Thank you to our collaborators at the University of Delaware for helping with the interpretations of these data. And finally, thank you to the children and families who participated in the NICHD- Study of Early Child Care and Youth Development.