Using SAS PROC Mixed (ML), we examined effects of interactions between EHS and child development through school, making early intervention imperative.

Further, parenting-related stress—which is exacerbated by poverty—impacts children’s language, likely through its impact on parent-child interactions. Boys and girls may be differentially susceptible to the influence of parenting-stress on their development. Early Head Start (EHS) was designed to address the needs of both parents and children in order to reduce income-based disparities in child development and school-readiness. The EHS program has small, consistent positive impacts on children’s cognition, language, and behavior, and positive effects on parent-child interaction. The effects on language are achieved by reducing parenting-stress and by protecting parent-child interaction from the negative effects of parenting-stress. Interestingly, girls’ expressive vocabulary may benefit more from EHS participation than boys.

Research Questions

The current study addresses the mechanisms by which EHS benefits early language skills. We ask:

1. Does EHS promote language development despite parenting-stress, or protect language development from parenting-stress?
2. Do the impacts of EHS on language in the context of parenting-stress vary by child gender?

Methods

Samples & Measures
A. The national Early Head Start Research and Evaluation (EHSRE) dataset (N = 3,001)
   - We tested basic relationships across the whole sample across 17 sites, estimating the average effects of the program when children were infants and toddlers.
   - We analyzed child vocabulary at 24 months controlling for 14-month vocabulary.
B. A dataset from one high-quality EHSRE site (New England; N = 146) where additional data on expressive vocabulary were collected.
   - We examined growth in expressed vocabulary during mother-child interaction when children were 14, 24, and 36 months.

Analysis
- Using SAS PROC Mixed (ML), we examined effects of interactions between EHS enrollment, parenting-stress, and child gender.
- We controlled for demographic risks, child’s birth order, and self-regulation.

Results

In the national sample, EHS protected toddler girls’ vocabulary from the negative effects of mothers’ parenting stress, but had no effect on boys’ vocabulary.

Discussion

In the national sample girls’ language at 24 months is protected from mothers’ stress, whereas girls’ language development is promoted, but not protected, in the NE sample. Conversely, boys’ language at 24 months is neither protected nor promoted, but in the NE sample, boys’ language development is protected.

- The inability of EHS to protect girls from mothers’ stress may be because girls are more directly affected by parental mental health, while the effects for boys are mediated by mother-child interaction.
- Programs that affect parent-child interaction (e.g. through home visiting) may be more successful in protecting boys’ development, whereas programs offering developmental stimulation (e.g. center-based services) may be better at promoting girls’ development.

Differences in results in the two samples could be explained by differences in:

- Un-measured qualities of the two samples
- EHS intervention quality: the NE program was high-quality, mixed-model
- Language measures: maternal report vs. observation during interaction

We conclude that:

- The EHS intervention differentially effects boys’ and girls language skills in the context of parents’ stress, but both boys and girls benefit from a high-quality, multi-generational, early intervention program such as Early Head Start.

References

7. Love, J. M., Kisker, E. E., Ross, C., Raikes, H., Constantine, J., Boller, K., Brooks-Gunn, J., Chazan-Cohen, L., Vogel, C. (2005). The current study addresses the mechanisms by which EHS promotes language development. The EHS program has small, consistent positive impacts on children’s cognition, language, and behavior, and positive effects on parent-child interaction. The effects on language are achieved by reducing parenting-stress and by protecting parent-child interaction from the negative effects of parenting-stress. Interestingly, girls’ expressive vocabulary may benefit more from EHS participation than boys.

Bothering boys. The NE EHS program protected girls’ vocabulary (purple solid line) but did not protect it from the negative effects of mothers’ stress (purple dash vs. green dash).

Buffering boys: The NE EHS program protected boys’ vocabulary from the negative effects of parenting-stress (purple dash), but did not promote boys’ vocabulary beyond the protection from parents’ stress (purple solid line vs. green solid line).