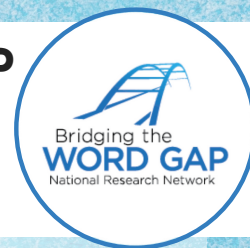


# BRIDGING THE WORD GAP RESEARCH ROUNDUP

## A SYSTEMATIC REVIEW OF LANGUAGE INTERVENTION RESEARCH FOR CHILDREN FROM LOW-INCOME BACKGROUNDS: A WORD GAP PREVENTION PERSPECTIVE



### WHAT DID YOU STUDY?

- We conducted a systematic review of language intervention studies conducted with young children from low-income backgrounds likely to experience the Word Gap. From a prevention perspective, we evaluated the strength of evidence supporting interventions conducted with this population as well as needed features for scalability and for replication by communities to produce population-level outcomes. We evaluated studies relative to the standards established by the Society for Prevention Science (see Gottfredson et al., 2015) that include evidence of ecological validity, rigor/trustworthiness, and readiness for scale-up.
  - **Ecological validity** referred to evidence from studies conducted in authentic settings by authentic implementers targeting children from low-income families. **Trustworthiness** included evidence from studies incorporating strong controls for internal and external validity, as well as measurement of the necessary and sufficient intervention conditions implemented.
  - **Readiness for scale-up** included evidence that the intervention can be implemented as intended by community implementers, that the intervention has the necessary infrastructure to support its implementation, and that it has the tools needed for monitoring its implementation fidelity.

### HOW DID YOU STUDY IT?

Within the repository of language intervention studies identified by the Bridging the Word Gap Research Network (Carta, Greenwood, & Walker, 2016), we located 513 language intervention studies published between 1975 and 2015. Within that group of studies, we focused on the 27% ( $n = 140$ ) and described research design quality indicators, intervention characteristics and participant characteristics.

### WHAT DID YOU FIND?



#### 1. Were the interventions ecologically valid and carried out in authentic implementers and in real-life settings?

- There was relatively weak evidence of ecological validity.
  - The majority of interventions were implemented by research staff and not parents, early educators, or home visitors.
  - Most interventions were carried out in child care (57%) or home settings (41%); few took place in everyday places in the community like laundromats or grocery stores.



#### Were the intervention studies trustworthy?

- Trustworthiness of studies varied by the type of research design.
  - In 58% of studies, researchers employed the gold standard, randomized control trial to rule out selection bias; 28% of studies researchers employed quasi-experimental designs and more than half of these did not control for selection bias; and in 15% of studies, researchers employed single-case designs and met most of the design standards.



### Were the interventions implemented with high fidelity?

- o Researchers assessed fidelity of intervention implementation in fewer than half of the studies.
  - When fidelity was reported, it was unclear whether the intervention was implemented as intended.



### Does the evidence from the interventions consider moderating factors?

- o Only 34% of the studies investigated the effects of moderators on children's language outcomes.
  - These analyses showed that not all children benefited equally from the interventions and some specific child characteristics (such as gender, age, and heritage language) were differentially related to intervention outcomes.
  - Small percentages of studies included analyses of mediators (e.g., fidelity of implementation) that helped indicate the conditions under which children would be most likely to benefit from the intervention.



### Were the interventions ready for scale-up?

- o Limited support for these interventions' readiness for scale-up and most were in their early to mid-stage of development relative to the standards of evidence (Gottfredson et al., 2015).
- o Weaknesses included:
  - Limited infrastructure to support implementation and engage targeted communities in Word Gap prevention.
  - Limited knowledge on whether adult participants in interventions were satisfied or valued their experience (i.e., social validity).
  - Overreliance on one method of intervention training (e.g., group training) and infrequent use of promising techniques such as use of adult peer trainers or coaching.

## WHY DOES THIS STUDY MATTER?

The prevalence of US children growing up in poverty and who likely experience the Word Gap and lower school readiness is estimated to be 20%, even higher in subpopulations: Blacks (29%) and Hispanics (25%) (Child Trends, 2019). The economic, educational, health, and social costs of poor educational outcomes over the life course are astronomical. We need to develop early language interventions for parents, other caregivers, and community sectors that can be scaled up based on evidence of effectiveness, feasibility, and low cost (Greenwood et al., 2017). While the birth to age three age period offers the greatest potential for improving learning and preventing life-long adverse outcomes, it has been studied least frequently compared to other age groups.

# WHAT'S NEXT?

More research is necessary on the supports and guidance that will help parents and caregivers from low-SES environments implement language intervention with children birth to three years of age with fidelity.

- Community-level intervention trials are needed using interventions and tools in tests of prevention.
- More research is needed on interventions implemented simultaneously and in combination by parents at home, non-parental caregivers in childcare, and individuals from other community sectors (i.e., library staff).
- More research and development are needed on tools that will achieve widespread use of these interventions at reasonable costs, such as web-based platforms for parents practitioners, and communities that include actionable data about progress toward language outcomes.
- Follow-up studies demonstrating the long-term effects of language intervention on children' growth in language, school readiness, and reading outcomes are needed.



## WHO WE ARE:

Greenwood, C. R., Schnitz, A. G., Carta, J. J., Wallisch, A., & Irvin, D. W. (2020b). A systematic review of language intervention research with low-income families: A word gap prevention perspective. *Early Childhood Research Quarterly*, 50, 230–245. <https://doi.org/10.1016/j.ecresq.2019.04.001>

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