

The Home Literacy Environment Is a Correlate, but Perhaps Not a Cause, of Variations in Children's Language and Literacy Development

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Maternal language was a significant predictor of storybook exposure but not of direct literacy instruction. Maternal language and phonological skills predicted children's language and reading/spelling skills, respectively. Direct literacy instruction remained a predictor of children's reading/spelling skills.

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The present study investigated whether the home literacy environment predicts children's reading and language skills once maternal language abilities are taken into account. Longitudinal data were collected during the preschool years

for 251 children at high risk of dyslexia. Maternal language was a significant predictor of storybook exposure but not of direct literacy instruction. Maternal language and phonological skills predicted children's language and reading/spelling skills, respectively. After accounting for variations in maternal language, storybook exposure was not a significant predictor of children's outcomes. Direct literacy instruction remained a predictor of children's reading/spelling skills.

- It is well established that the home literacy environment is an important predictor of children's language and literacy development.
- The home literacy environment usually refers to activities undertaken by family members at home that relate to literacy learning as well as the literacy resources in the home and parental attitudes toward literacy.
- Home literacy environment activities may be formal or informal and active or passive.
- Genetic factors also have an important influence on literacy development.
- The heritability of reading and spelling is estimated to be .73 and .64, respectively, whereas shared environmental influences accounted for only 10% of the variance in reading.
- The correlation between the home literacy environment and children's literacy skills may be genetically mediated.

What is gene-environment (ge) correlation?

- Ge correlation refers to the influence of parental genes working via the environment.
- A passive ge correlation is observed when there is a correlation between the parents' genotype and both the child's genotype and their environment.
- An evocative ge correlation refers to the association

between an individual's genetically influenced behaviour and others' reactions to that behaviour.

- An active gene-environment correlation is observed when there is an association between a given genetic endowment and the environmental niches that individual selects.



The study

Hypotheses

- *Measures of maternal language skills will predict the home literacy environment.*
- *Measures of the home literacy environment will predict children's language and reading/spelling skills.*
- *Which measures of the home literacy environment will predict children's outcomes after controlling for variations in mothers' language and phonological skills?*

The participants were 251 children from the Wellcome Project, and children who were at cognitive risk of developing reading problems later on were overrepresented.



Findings

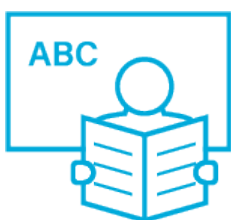
- Direct literacy instruction predicted child reading/spelling skills.
- Storybook exposure (i.e. the number of children's books,

shared reading, parental familiarity with children's books and parental literacy instruction) predicted both children's language and reading/spelling skills.

- When maternal language and phonological skills were controlled in the model, neither of the paths from storybook exposure to child skills were significant.
- The path from direct literacy instruction to child reading/spelling skills remained significant after accounting for the effects of maternal phonological skills.

Summary

- Maternal language skills were a significant predictor of storybook exposure but not direct literacy instruction.
- Storybook exposure predicted children's general language and reading/spelling skills, whereas direct literacy instruction only predicted children's reading/spelling skills.
- Once mothers' language and phonological skills were taken into account, storybook exposure was no longer a predictor of children's language or reading/spelling skills.
- Direct literacy instruction remained a predictor of children's reading/spelling skills after accounting for variations in maternal language and phonological abilities.



Implications

- The findings suggest that the informal home literacy environment does not directly influence children's language and reading development.
- The effects of the informal home literacy environment may rather reflect genetic influences; that is, mothers with good language skills pass on genes that confer good language skills. Storybook exposure correlated highly with both maternal language and SES, suggesting that maternal education, rather than maternal genes, is also a plausible driver of the effects.
- The effects of direct literacy instruction in the home on children's early mastery of the mechanics of reading and spelling do appear to reflect environmental influences, although the influence is weak.
- The findings thus suggest that it is not solely the amount of literacy activity a child is exposed to that determines his or her early language and literacy development; it is also the linguistic ability of the parent who is providing the literacy environment at home.
- If the relationship between the informal home literacy environment and child language and reading/spelling outcomes reflects the effects of gene correlations, this does not mean that interventions to improve or enrich the home literacy environment will not be effective in promoting children's language and reading development.