

Why Are Home Literacy Environment and Children's Reading Skills Associated? What Parental Skills Reveal

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Data from 101 mother/father/child triads were used to consider the extent to which associations between home literacy and children's reading fluency could be accounted for by parental reading fluency. Although home literacy correlated significantly with children's reading, no variable predicted significant variance after allowing for parental reading, except the number of books in the home.

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Associations between the home literacy environment and children's reading ability are often assumed to reflect a direct influence. However, heritability could account for the association between parent and child literacy-related measures. Data from 101 mother/father/child triads were used

to consider the extent to which associations between home literacy and children's reading fluency could be accounted for by parental reading fluency. Although home literacy correlated significantly with children's reading, no variable predicted significant variance after allowing for parental reading, except the number of books in the home.

- Children's word-reading accuracy and fluency (i.e. decoding) is linked to aspects of the family environment that children grow up in, including parents' educational attainment, how often parents read themselves and to their children and the availability of reading material.
- Individual differences in reading are due to both environmental and genetic influences, with a substantial heritability of about 70%.
- Therefore, the association between home literacy and children's reading ability may well be explained (at least partly) by a third variable: genes shared by parents and offspring.
- The relationship between home literacy and child outcome might reflect a passive gene-environment correlation.
- According to the intergenerational multiple deficit model, the reading skills of the parents can be treated as an indicator of familial effect, which is a combination of the genetic and environmental influences transmitted from parent to child.
- It is reasoned that if an environmental measure is still significantly associated with children's reading after controlling for parental reading, the environmental measure exerts an effect on children's reading that is partly independent of the familial effect.
- Thus, an environmental measure exerts a true environmental effect (i.e. cultural transmission), rather than just a masked genetic effect (i.e. gene-environment correlation).
- It is important to identify variables that represent a true environmental effect as those are the variables

that we can potentially manipulate to improve children's achievement.



The study

The present study examines reading fluency in a sample of children and their parents. The focus was on decoding skills because they form the basis for reading comprehension skills, and a decoding deficit is the primary criterion for dyslexia. As measures of the family environment, parental education and home literacy were studied. As indicators of home literacy, parents' print exposure and the availability of magazines, newspapers and books in the home were used.

Research question

1. Does the family environment predict children's reading fluency after controlling for the reading fluency of both parents?

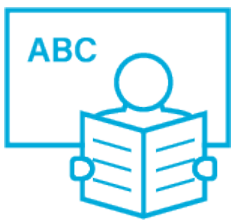
The data consisted of 101 Dutch mother/father/child families of which both (biological) parents and at least one child took part. The mean age of the children was 10.92 years old.



Findings

- Children's reading fluency correlated with parental reading fluency, parental educational level, fathers'

- reading frequency and the number of books at home.
- Parental education explained 7% of the variance in child reading but not over and above parental reading.
 - Parental reading fluency explained 17% of the variance in child reading.
 - Fathers' reading frequency was a significant correlate of children's reading but, together with mothers' reading frequency, did not account for a significant amount of variance in children's reading or beyond parental reading fluency.
 - The number of books at home predicted children's reading fluency, and this effect remained significant after controlling for parental reading fluency, accounting for an additional 5% of the variance.



Implications

- Parental education and parental reading frequency did not predict children's reading fluency over and above parental reading fluency. That is, the reason why these aspects of the home environment were connected with children's reading seemed to be because parents with good reading skills tend to have children with good reading abilities, as well as high educational attainment and highly literate homes.
- The strongest correlate of child reading appeared to be the number of books in the home, which predicted child reading over and above parental reading fluency.
- Two qualifications should be noticed when considering the conclusion that parent-offspring resemblance only

seems to reflect genetic transmission. First, this does not imply that parental behaviour makes no difference; it would only mean that growing up with caretakers of a certain reading level is not a risk or protective factor. Second, this conclusion pertains to parent-offspring resemblance, whether that is due to genetic or environmental transmission.

- It is possible that those with a family risk may benefit from a qualitatively different approach to reading instruction, rather than just increased quantity. For instance, it may be beneficial to control the timing of instruction and support to ensure that the child has underlying phonological skills firmly in place before introducing written language.
- The number of books in the home seems to have a genuine environmental effect.
- The key question here would be whether merely providing families with more books would enhance children's reading. From an educational viewpoint, it makes more sense to try to boost reading by providing books and encouraging families to engage in family literacy practices, such as shared reading and/or the direct tutoring of decoding.
- Correlations between children's reading fluency and other measures of home literacy could all be accounted for in terms of passive gene-environment correlations.
- It is possible that causal environmental effects might be observed with a larger sample and/or different methods.