

Home Practices and Parent Factors In Relation to Numeracy Skills in Young Canadian and Greek Children

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Background Information & Hypotheses

Numeracy achievement in kindergarten is a strong predictor of later math performance. Past research findings indicate that parent expectations, education, and academic attitudes are related to children's academic performance. Are parents' *behaviours* better predictors of their children's performance than their expectations? We hypothesized that parents' home practices *mediate* relations between their academic expectations and attitudes, and children's performance. A Greek sample is used as a comparison since previous work has focused on North American culture and expectations.

The Current Study

Participants:

204 parents and Kindergarten children
 M = 5 years, 10 months
 104 Canadian; 100 Greek

Parent Questionnaire measures:

- Frequency of early home numeracy practices (e.g., practice math facts, play board games)
- Frequency of reading aloud to children
- Number of children's books in the home
- Parent education level
- Parent academic achievement expectations
- Parent attitudes toward mathematics.

Child assessment measures: Numeracy tasks (e.g., saying the next number, counting, and basic calculations)

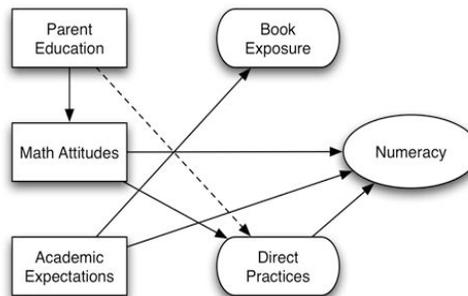
Results

Numeracy achievement was higher when:

- Parents had more education
- Parents reported more numeracy activities
- Parents had higher academic expectations
- Parents had more positive views of their own math skills

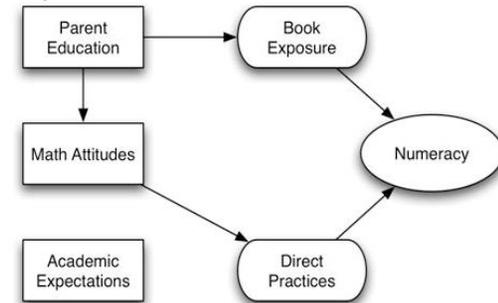
Hypotheses were tested with multiple regression. The patterns of relations among parent attitudes, academic expectations, practices, education, and numeracy performance of their children are summarized in Figures 1 and 2.

Figure 1: Canadian Children



- For Canadian children, parent expectations and math attitudes were significant *direct* predictors of numeracy outcomes.
- There was no relation between book exposure and numeracy scores in Canadian children.

Figure 2: Greek Children



- For Greek children, home practices mediated the relations between parent attitudes and education, and children's early numeracy skill as predicted.
- For Greek children, book exposure predicted early numeracy scores.
- Frequency of exposure to books was lower for Greek than Canadian children. Greek parents may be less concerned about reading to their children because Greek literacy skills are more transparent and easier to acquire than similar skills in English.

Home numeracy experiences predicted children's numeracy scores cross-culturally. The home environment in both Greek and Canadian cultures provides an important foundation for early learning in the area of children's mathematics development.