

Parenting Beliefs and Academic Achievement: The Mediation Role of Language

Zohreh Yaghoub Zadeh & **Nancie Im-Bolter**
Canadian Council on Learning Trent University



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Abstract

The present study was designed to investigate the mediational role of language in the association of early authoritarian parenting beliefs (when children were 1-month-old) and later academic achievement in children. Using longitudinal data and Structural Equation Modelling on a sample of 1364 children assessed at 1-month, 36-months, and 54-months, and when they were in grade 1 (NICHD) we found that children's language functioning when they were 36-months fully mediated the effect of early negative parenting beliefs on children's later academic achievement.

Introduction

Several studies have demonstrated the impact of parenting on children's academic achievement. In particular, it has been found that children of authoritarian parents are less likely to perform well in school but the specific mechanisms that underlie this relationship remain unclear.

It is possible that the development of skills that lay the foundation for academic success might be found in early parent-child interactions.

Introduction (cont'd)

Authoritarian parents are less likely to encourage dynamic verbal interactions with their children, which may hinder language development and academic achievement.

In other words, it is likely that language competence mediates the relationship between parenting and academic achievement.

The Current Study

- We explored the extent to which children's language functioning at 36-months mediates the impact of early authoritarian parenting beliefs (when the child is 1-month-old) on academic functioning when the child is 54-months.
 - Structural Equation Modeling was used to examine the fit for the direct-effect model (independent contribution of language and parenting beliefs) (Figure 1) with the proposed mediation model in which language functioning at 36-months mediates the impact of early parenting beliefs on children's academic achievement at 54-months (Figure 2).
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The Model Features

- **Covariate:** The effect of parental level of education is covaried. Paths from level of education constructs to all the other constructs are hypothesized and included in both models (**Green paths**).
- **Continuity:** In both models continuity of parental traditional beliefs constructs (1-month and Grade 1), language constructs (36- and 54-months) and academic achievement constructs (54-months and Grade 1) were hypothesized (**Blue paths**).
- **Concurrent associations:** The relationship between contemporaneous constructs are hypothesized to be correlational by including two-way arrows (**Black paths**).

Figure 1: Direct-effect Model

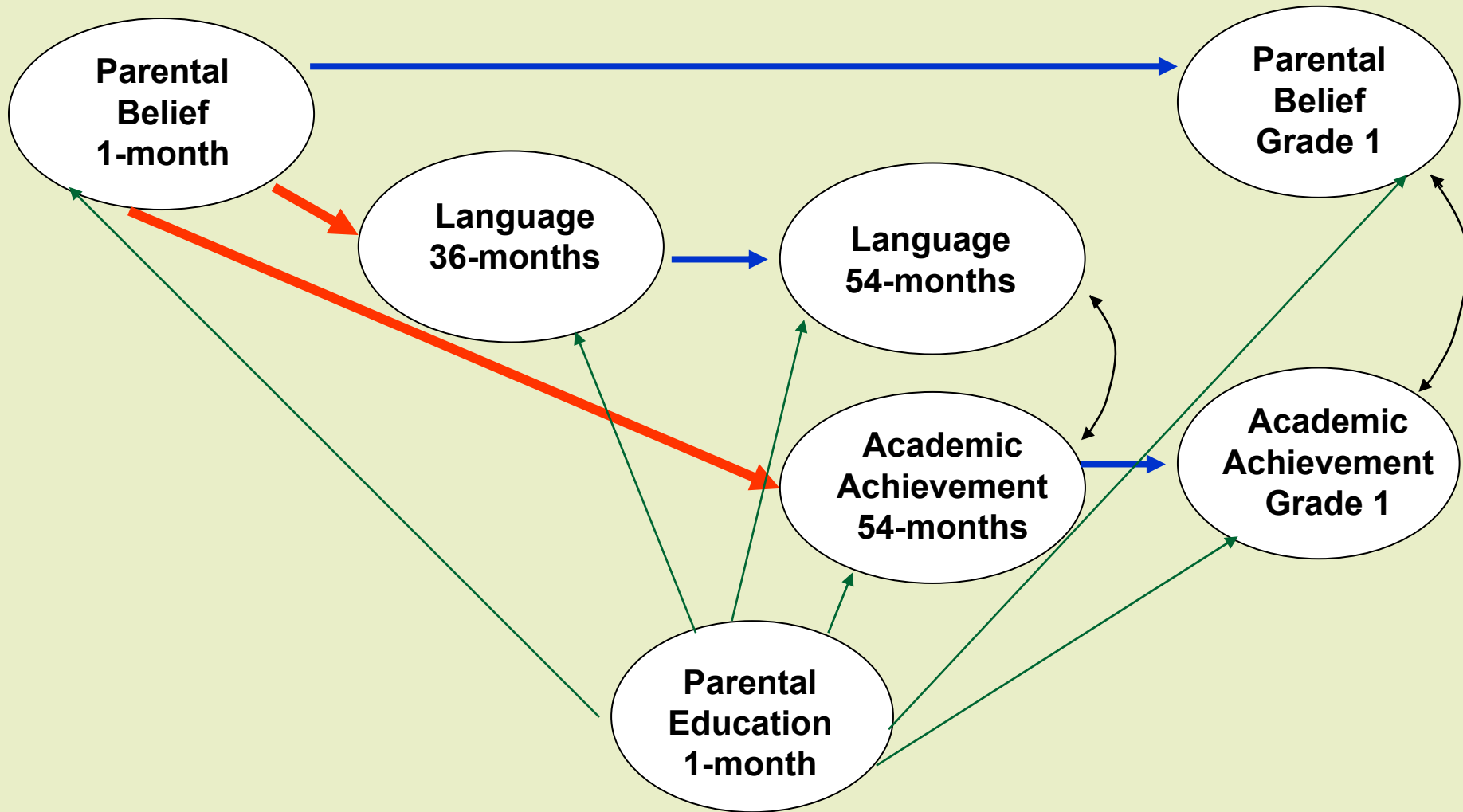
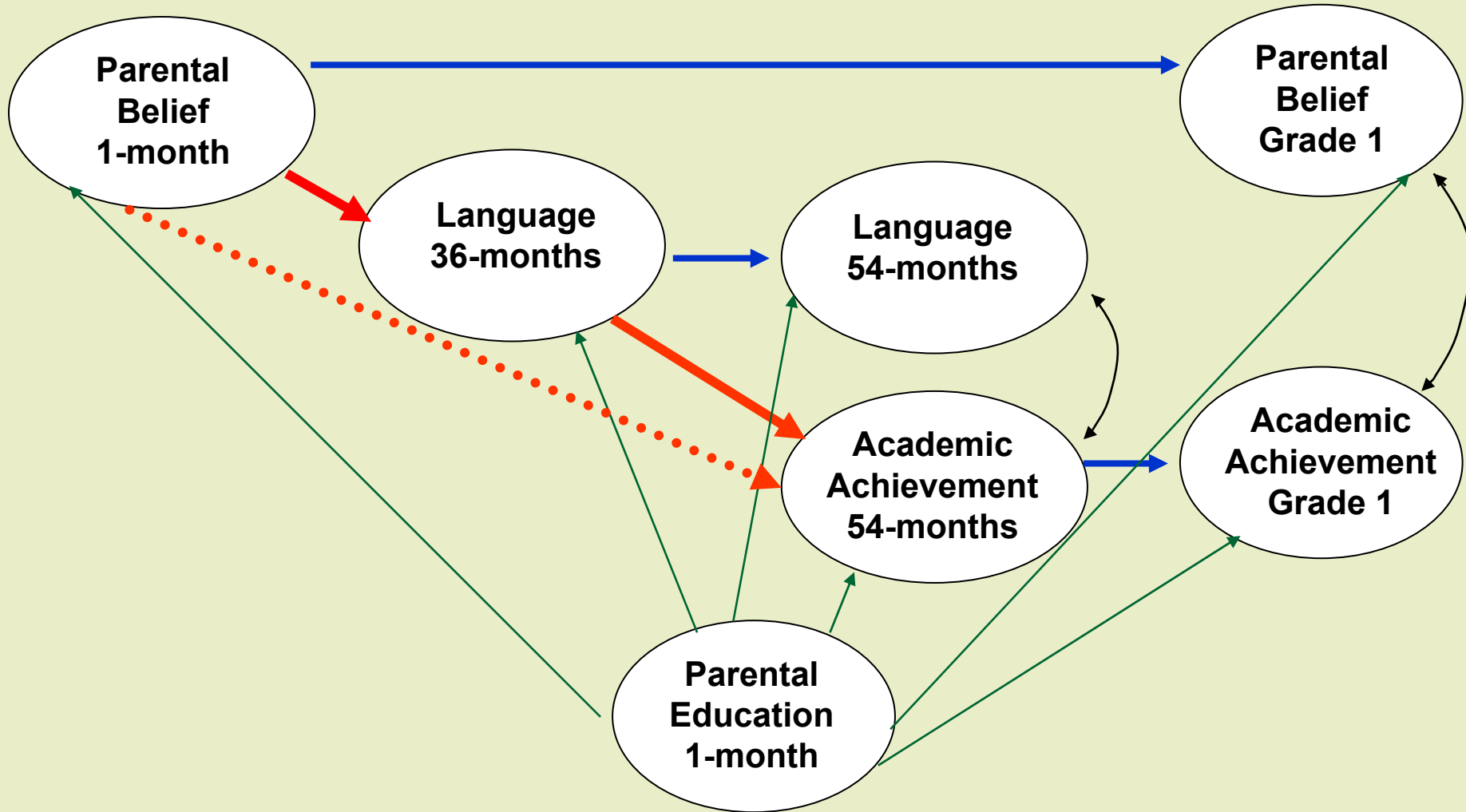


Figure 2: Proposed Mediation Model



Method

- Data from National Institute of Child Health and Human Development NICHD (a large scale longitudinal database) was used.
 - Multiple imputation was used to estimate the missing data points.
 - This resulted in a large sample size (N = 1364).
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Measures

At 1- month

- *Parental level of education*
- *Parental beliefs*
 - Ideas about Raising Children: Traditional beliefs for raising children subscale

At 36 - months

- *Language functioning*
 - The Reynell Developmental Language Scales
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Measures (cont'd)

At 54 - months

- *Language functioning*
 - The Preschool Language Scale-Third Edition
- *Academic achievement*
 - Woodcock-Johnson Test of Achievement: Letter and word identification and Math problem solving subtests

At Grade one

- *Academic achievement*
 - Woodcock-Johnson Test of Achievement: Letter and word identification and Math problem solving subtests
 - *Parental Beliefs*
 - Ideas about Raising Children: Traditional beliefs for raising children subscale
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Results

■ Model Testing

- Confirmatory factor analysis was used to test the measurement model and to define the latent variables.
 - The factor loadings for all the measures were significant and above 0.64.
 - In addition to covariate, correlational, and continuity paths, the direct model included the direct paths from parenting beliefs at 1 month to language at 36-months and to academic achievement at 54-months of age (**Red paths** - Figure 1).
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Results (cont'd)

■ Summary

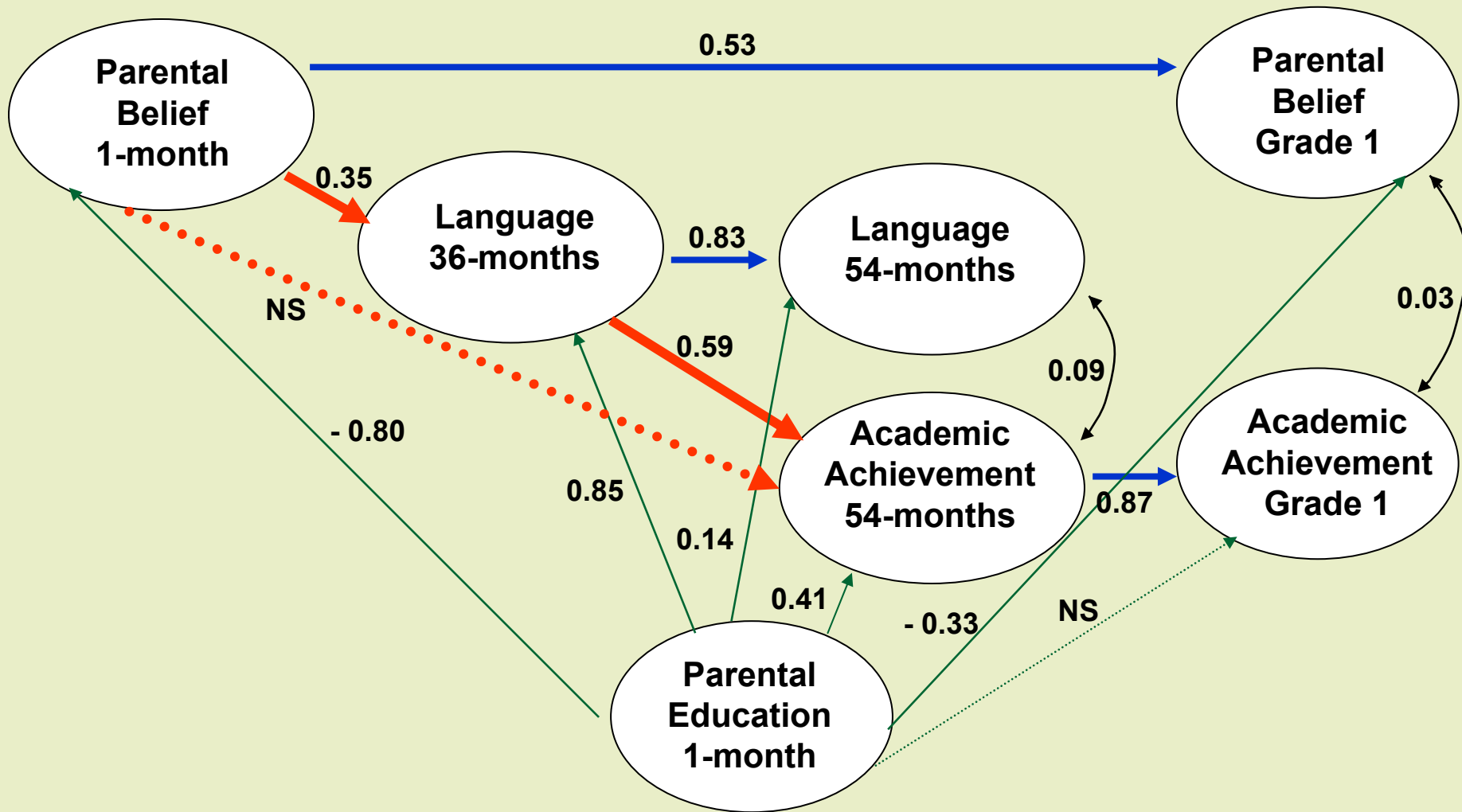
- First, we fit the direct-effect model.
 - The fit indices indicate that the direct model fits well into the data ($\chi^2(41) = 65.87$, RMSEA = .021, GFI = .99, AGFI = .99).

- Next, we fit the proposed mediation model
 - Fit indices indicate that the mediation model fits the data well ($\chi^2(40) = 56.94$, RMSEA = .018, GFI = .99, AGFI = .99).
 - Significant **red path** coefficients in Figure 3 indicate the mediation role of language.

Results (cont'd)

- Summary (cont'd)
 - To assess which of the two models fit the data better, the chi-square values of the proposed mediation model and the direct-effect model were compared.
 - **This comparison indicates that the mediation model fit the data better than the direct-effect model ($\Delta \chi^2 (1) = 8.93$, $p < .005$).**
 - The path from language at 36-months to academic achievement at 54-months is significant while the path from parent traditional beliefs to children's academic achievement at 54-months becomes non-significant indicating that this impact is fully mediated by language at 36-months of age (Figure 3 - **Red paths**).

Figure 3: Mediational Model



Discussion

- The findings of this study point to the mediational role of language functioning in the impact of early traditional parenting beliefs on academic achievement.
 - It seems that early traditional parenting beliefs negatively impact on early parent-child interactions, which then negatively affect child language development
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Discussion (cont'd)

- Early negative parenting beliefs (e.g., children should follow adult directives without question, expectations of total child obedience) negatively impacts on children's language development and subsequently negatively impact early academic achievement.
 - The enduring effects that early negative parenting beliefs can have on later achievement makes the early identification and intervention of negative parenting beliefs and practices important and may enable practitioners to intervene before potential negative developmental effects can occur.
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Discussion (cont'd)

- Very early negative parenting beliefs can be damaging to later child development, not only in the language domain but for early academic achievement.
 - The high level of association between parental education and traditional parenting beliefs suggests that parents with lower levels of education are more likely to hold authoritarian parenting attitudes which may hinder their children's language development and subsequently their academic achievement.
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