

EXPLORING THE COMMON FATE MODEL

Chaos in the Home, Partner Conflict Resolution, and Child
Behavior Problems

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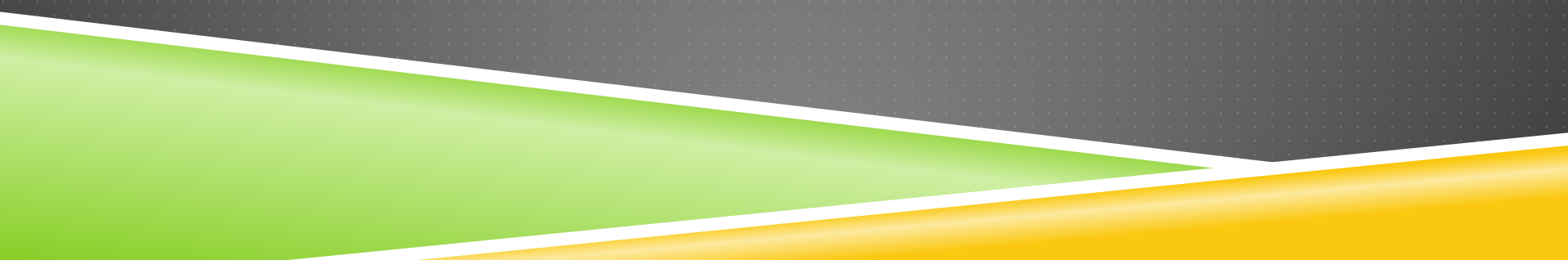
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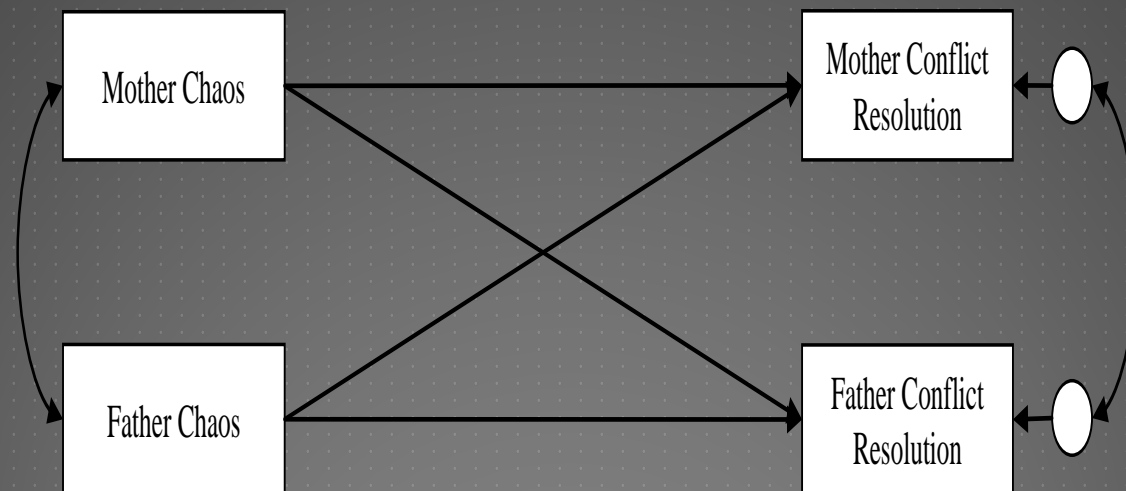


► Gonzalez and Griffin (2012) note that in research about relationships:

“interdependence is not treated as a nuisance that needs to be corrected but rather as one of the key psychological parameters to model” (p. 439).

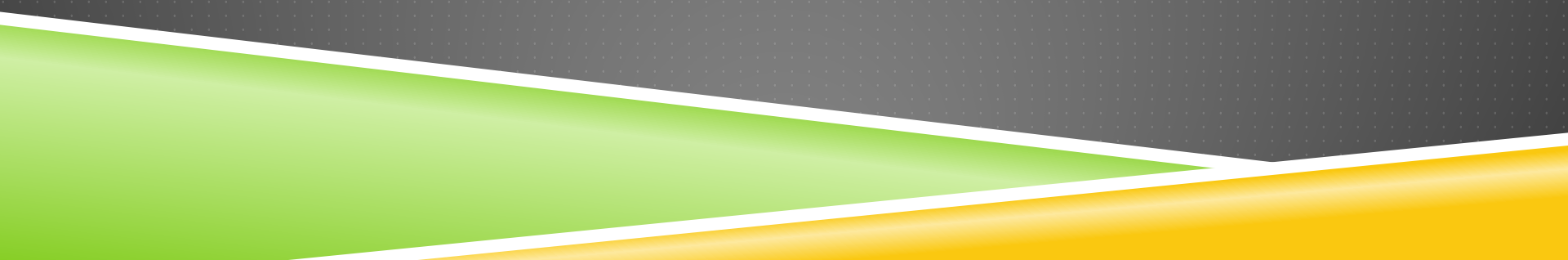


ACTOR/PARTNER INTERDEPENDENCE MODEL (APIM)





THEORY BEHIND STUDYING DYADIC/FAMILY PHENOMENA

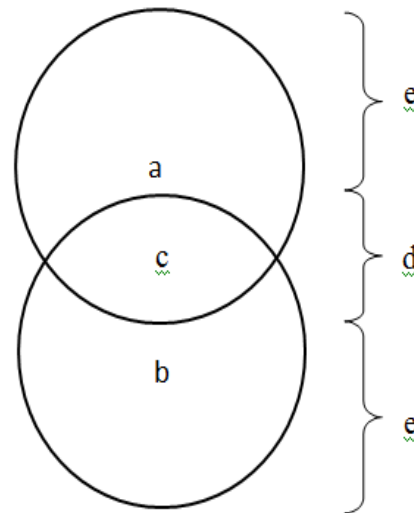
- ▶ Interpersonal interaction is a fundamental component of human life worth exploring.
 - ▶ Human thoughts, emotions, and actions are impacted not only by the individual displaying these outcomes, but also by those connected to the individual in his or her life (e.g. romantic partner, friend, child, etc).
 - ▶ Processes within the group can operate in direct and indirect ways. These direct and indirect processes represent unique group-level contexts (e.g. common expectations) which may impact other group or individual level phenomena.
 - ▶ Individual functioning is related not only to the individuals themselves, but also to the complex system of behaviors between members of the system (e.g. family rules, family goals, roles within the system, etc.)
- 

TWO METHODOLOGICAL ISSUES TO THINK ABOUT

- ▶ Multiple individuals in the same group may share similar responses about the same group-level phenomenon (i.e. shared variance and non-independence of data)
- ▶ Properties of interdependent relationships may represent either individual-level or group-level phenomena
 - ▶ “I am happy with my relationship;” “My partner listens to me.”
 - ▶ “It is a real zoo in our home”; “We can usually find things when we need them”; “In our relationship, we talk about things that make us angry.”

CONCEPTUAL REPRESENTATION OF DYADIC ANALYSIS TECHNIQUES

FIGURE 1: Conceptual Representation of Dyadic Analysis Techniques



Notes. Areas a and b represent *individual* scores for actor and partner variables in the APIM. In the APIM, area c is modeled by considering correlations between individual scores and is treated as error or shared method variance. In common fate modeling techniques, area c is treated as a *dyadic* score, while areas a and b are treated as error in assessing the dyadic construct. The degree of overlap denoted by d is the overlap of *individual* scores and, therefore, considers the overlap of c with areas a/b. Thus, d is distinct from c and represents similarity between individuals (commonly assessed with similarity indexes). Finally, the areas that do not overlap, denoted by e in the diagram, represent dissimilarity or discrepancy scores between each *individual*.

USING THE COMMON FATE MODEL

- ▶ “The common-fate conception implies that two dyad members are similar to one another on a given variable due to the influence of a shared or dyadic latent variable” (Ledermann & Kenny, 2012, p. 141).
- ▶ Measure (or items) with wording representing group-level rather than individual-level process
 - ▶ “It is a real zoo in **our** home”; “**We** can usually find things when **we** need them”; “In **our** relationship, we talk about things that make **us** angry”
- ▶ Assessment of similarity between members (when $r > .2$, or factor loadings on common latent variable are $> .4$ see Ledermann & Kenny, 2012; or Ledermann & Macho 2009)
- ▶ If in an APIM the actor and partner effects have the same sign, and there is positive non-independence in both variable pairs, the CFM should yield reliable estimates.

EXAMPLE

CHAOS, CONFLICT RESOLUTION, AND CHILD BEHAVIOR PROBLEMS

HYPOTHESES

- ▶ We hypothesize that greater chaos in the home will result in a less positive emotional tone following conflict.
- ▶ Less positive resolution of conflict between parents will also be associated with child behavior problems.
- ▶ We further hypothesize that associations between chaos in the home and child behavior problems are likely mediated by the impact of chaos on parental conflict resolution.

SAMPLE

- ▶ 812 couples and a target child
- ▶ All participants in the Study of Early Child Care and Youth Development (SECCYD)
- ▶ 82% White, non-Hispanic
- ▶ 7.5% African American
- ▶ 6.2% Hispanic
- ▶ 4.3% “Other” Ethnicity
- ▶ 405 male children, 407 female children
- ▶ Data here represent 3 periods in time: 3rd grade, 5th grade, and 6th grade

MEASURES

- ▶ Chaos in the Home

- ▶ Confusion, Hubbub, and Disorder Scale (CHAOS), (Matheny, Wachs, & Phillips, 1995)
- ▶ 15 items assess routine, noise, and confusion.
- ▶ Sample items:
 - ▶ *You can't hear yourself think in our home*
 - ▶ *It's a real "zoo" in our home*
 - ▶ *We are usually able to stay on top of things*
- ▶ Higher scores represent a more chaotic home environment
- ▶ $\alpha = .78$ for fathers and $\alpha = .81$ for mothers

MEASURES

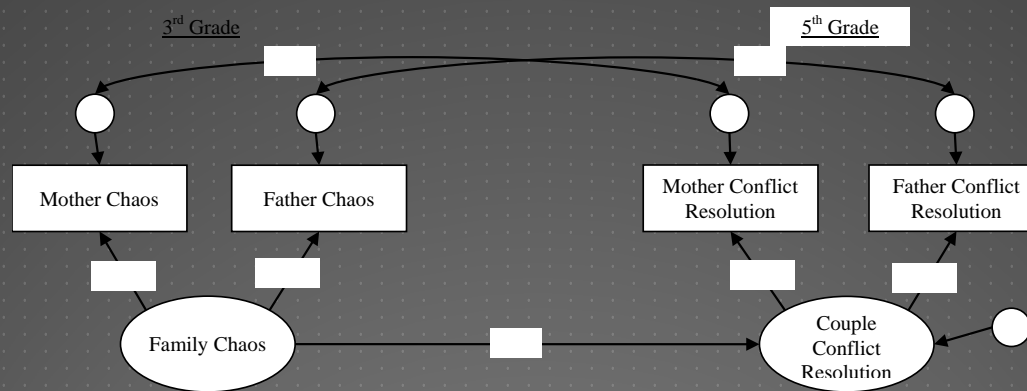
▶ Conflict Resolution

- ▶ Conflict Resolution Scale, (Kerig, 1996)
- ▶ 13 items designed to assess the “emotional tone” following conflict
- ▶ Sample items:
 - ▶ *We feel closer to one another than before the fight*
 - ▶ *We don't resolve the issue*
 - ▶ *We continue to hold grudges*
 - ▶ *We each give in a little bit to the other*
- ▶ Higher scores represent a more positive emotional tone following conflict.
- ▶ $\alpha = .87$ for fathers and $\alpha = .88$ for mothers.

MEASURES

- ▶ Children's Problem Behavior
 - ▶ Child Behavior Check List (Achenbach, 1991)
 - ▶ 118 items (internalizing, externalizing, and other thought and behavioral problems)
 - ▶ Scores on the CBCL are standardized and reported as T-Scores with higher scores indicating more problem behavior.
 - ▶ $\alpha = .95$ for fathers and $\alpha = .94$ for mothers

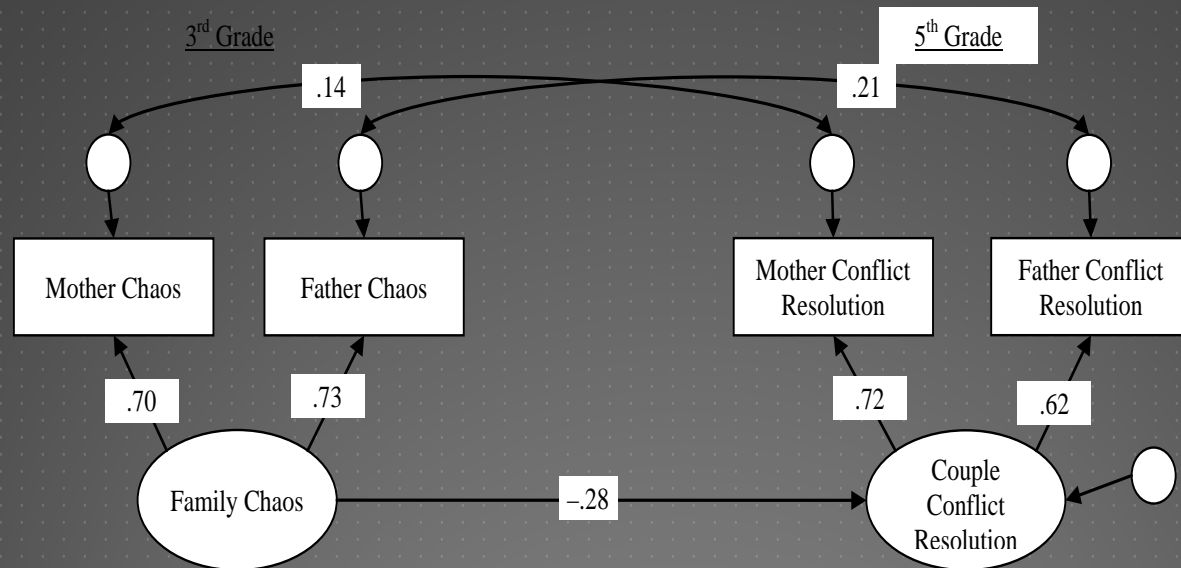
BUILDING YOUR COMMON FATE MODEL



Create your latent variables (representing how the observed variables are related to the latent group-level constructs).

Parameters: One intercept for each indicator, one variance for each error term, one variance for the exogenous latent variable and one for the disturbance variance for the endogenous latent variable, two covariances between the error terms, and one direct path at the dyad-level. Remember, one of the paths from your latent variable to your observed variable needs to be fixed as a reference indicator (i.e., the path weight is set equal to 1)

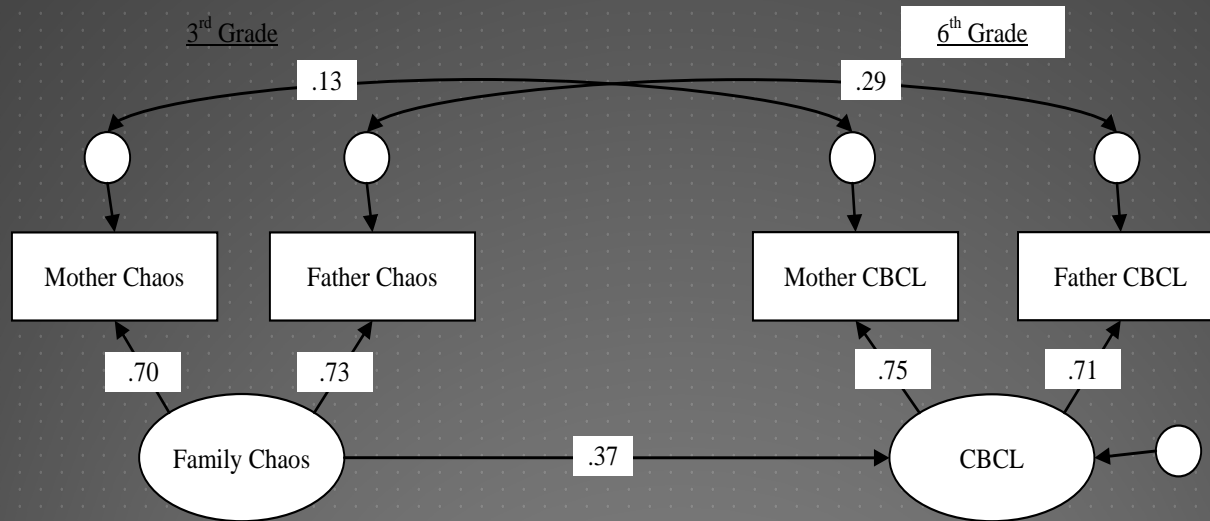
FIGURE I.



Notes. $N = 812$. Control variables include Father is Partner, Income-to-Needs ratio, Mother's Education, Child's Sex, Child is Firstborn, Child is Ethnic Minority, and Mother's Age.

Model Fit Statistics: $\chi^2 (15) = 13.461$, *ns*; CFI = 1.00; TLI = 1.00; RMSEA < .001.

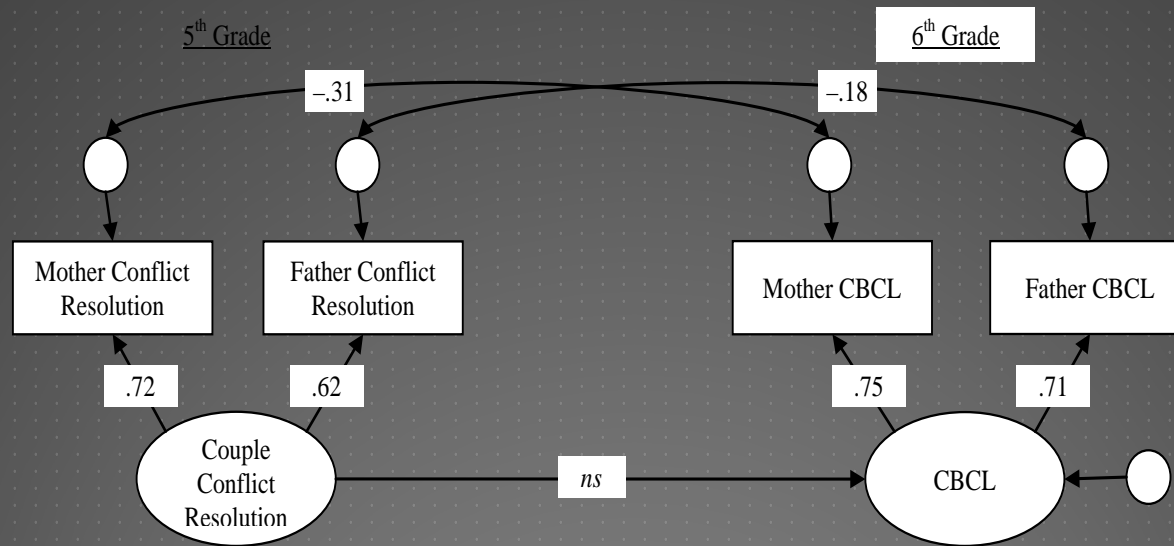
FIGURE 2.



Notes. $N = 812$. Control variables include Father is Partner, Income-to-Needs ratio, Mother's Education, Child's Sex, Child is Firstborn, Child is Ethnic Minority, and Mother's Age.

Model Fit Statistics: $\chi^2 (15) = 19.581, ns$; CFI = .997; TLI = .985; RMSEA = .019.

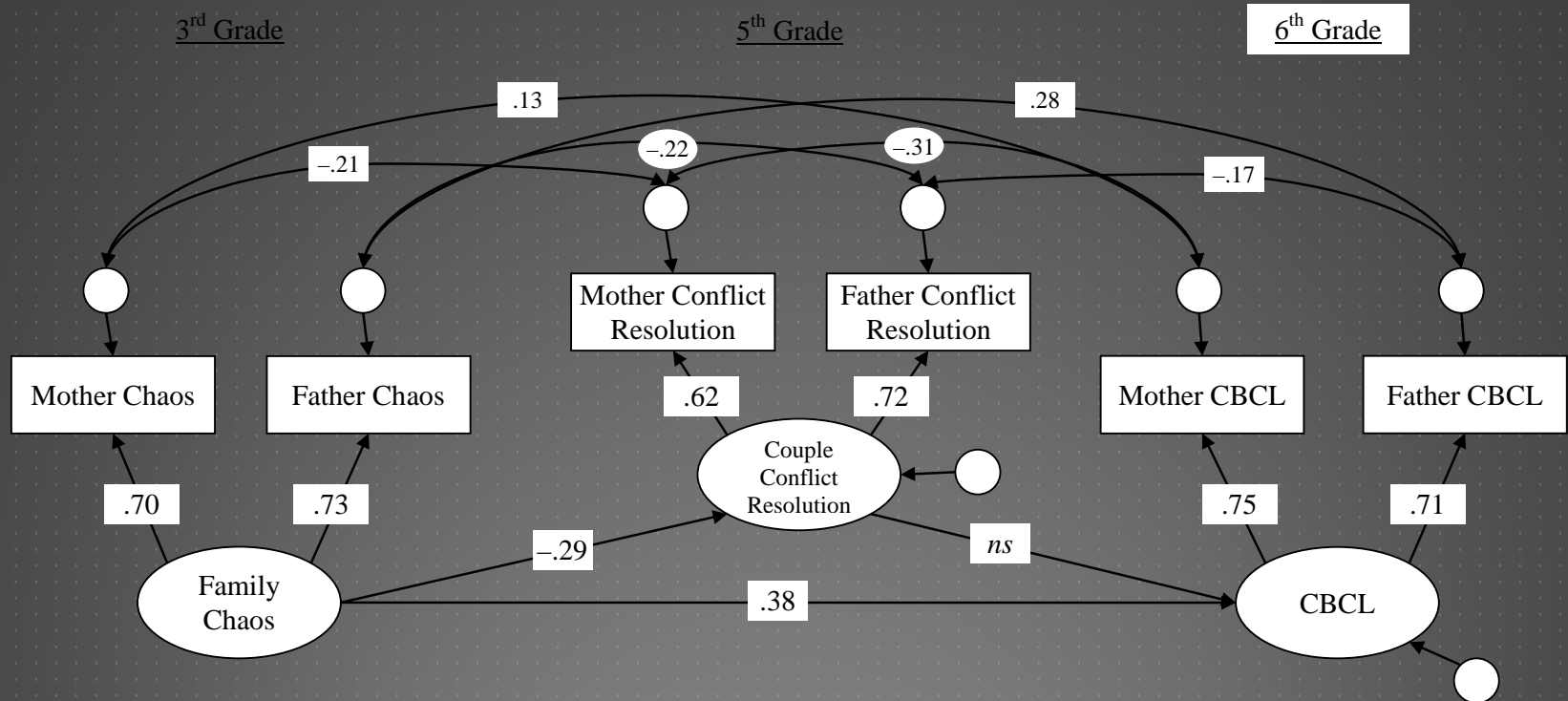
FIGURE 3.



Notes. $N = 812$. Control variables include Father is Partner, Income-to-Needs ratio, Mother's Education, Child's Sex, Child is Firstborn, Child is Ethnic Minority, and Mother's Age.

Model Fit Statistics: $\chi^2 (15) = 16.870, ns$; CFI = .998; TLI = .993; RMSEA = .012.

FIGURE 4.



Notes. $N = 812$. Control variables include Father is Partner, Income-to-Needs ratio, Mother's Education, Child's Sex, Child is Firstborn, Child is Ethnic Minority, and Mother's Age.

Model Fit Statistics: $\chi^2 (24) = 25.496, ns$; CFI = .999; TLI = .996; RMSEA = .009.