**Adoptive mother’s (93%) and fathers (92%) were mostly Caucasian**

Adopted children were mostly boys (57%) and placed with adoptive 

Biological mothers were primarily Caucasian (77%) and came from 

• Evidence also suggests that parenting behavior, important for supporting and/or hindering children’s SR, may be under the influence of parents own SR. 

• Given evidence of the heritability of SR (7) and that parental SR influences parenting behavior affecting children’s SR, findings within parenting influences children’s SR in biologically-related families may reflect passive gene-environment correlation (rGE). 

• In the current study, an adoption design, a genetically sensitive design that eliminates the possibility of passive rGE, was used to examine connections between parenting and children’s SR. 

• We anticipated finding evidence supporting genetic, including evocative rGE, and parenting influences on children’s SR. 

**Participants**

Adoptive mothers and fathers, adopted children, and biological mothers (n = 361) from the first cohort of the Early Growth and Development Study, a nationwide adoption study, participated. 

• Adoptive mother’s (93%) and fathers (92%) were mostly Caucasian 

• Adoptive household median income was $100,000 

• Adopted children were mostly boys (57%) and placed with adoptive families within an average of 7 days of age 

• Biological mothers were primarily Caucasian (77%) and came from lower SES backgrounds (median income 14K to 21K). 

**Measures and Procedure**

• At 16 months of age, adoptive mothers and fathers assessed adopted children’s anger, which was used to examine potential evocative rGE on parenting. 

• At 27 months of age, adoptive mothers and fathers interacted with their child for 8 minutes while completing a play and clean-up task. 

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**Measures and Procedure - Continued**

• Qualitative indicators of adoptive mother (AM) and father (AF) negative parenting behaviors were coded using an existing coding procedure by trained observers and included including: 

  - Expression of negative affect (3 codes; mean AM r = .52; mean AF r = .60), 
  - Intrusiveness (2 codes; AM r = .58 and AF r = .36), and 
  - Controlling behavior (2 codes; AM r = .39 and AF r = .34). 

  - Codes were aggregated so that one indicator of each parenting behavior was obtained 

  - a = .77 for AM indicators and a = .71 for AF indicators 

  - Mean correlation between AM and AF indicators was 0.10 (-.06 to .23) 

• Biological mothers completed a Go No/Go task, a measure of SR, when children were 4 yrs of age 

• Adopted children’s SR:

  - At 4.5 years AMs and AFs completed a measure of their adopted children’s effortful control15, r = .53 

  - A single indicator of effortful control was developed based on the mean of AMs and AFs standardized effortful control scores 

  - At 6 years, adopted children completed a Go/No Go task15. 

  - Association between adopted children’s effortful control and Go/No Go task performance was significant (r = .23); these SR measures were used as indicators of adopted children’s SR in SEM analyses 

**Discussion**

• Findings support the notion that genetic AND environmental influences are important contributors to children’s SR. 

• By accounting for passive rGE, this is one of the first studies to demonstrate that parenting behavior itself is important for children’s SR, which is critical given recent evidence that parenting behavior is also under the influence of SR. 

• Child effects, but not evocative rGE effects were also identified. 

• Limitations: other evocative or child-driven effects should be considered in future work; other aspects of the environment (e.g., home chaos) that may influence child SR should be considered in future work. 

**Background & Hypothesis**

• Self-regulation (SR) is important for numerous outcomes across the lifespan, with the period from birth to preschool age being notable for SR development and the potential influence of parenting on children’s SR. 

• Adoptive mothers and fathers (93%) and fathers (92%) were mostly Caucasian 

• Evidence also suggests that parenting behavior, important for supporting and/or hindering children’s SR, may be under the influence of parents own SR. 

• Given evidence of the heritability of SR (7) and that parental SR influences parenting behavior affecting children’s SR, findings within parenting influences children’s SR in biologically-related families may reflect passive gene-environment correlation (rGE). 

• In the current study, an adoption design, a genetically sensitive design that eliminates the possibility of passive rGE, was used to examine connections between parenting and children’s SR. 

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Supplemental Information & References

**Covariates and Data Analysis Information**

- The following potential covariates were considered in an initial set of analyses:
  - Obstetric Complications
  - Neonatal Complications
  - Openness in Adoption

- None of the zero order associations between these potentially important covariates and adopted children’s SR indicators were significant; the mean correlation was -0.001 (-0.08 to -0.04).

- When included in an initial SEM model for both the AM and AF models, model fit was poor, further supporting no association between covariates and key model variables. Covariates were trimmed from the final models.

- A SEM model wherein AM and AF parenting was included in a single model was initially run, with poor model fit resulting. In light of few significant associations between individual AM and AF parenting indicators (mean r = -0.10), separate AM and AF models were specified.

**References**


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