



Maternal Working Memory and Inhibition Differentially Predict Later Maternal Negative Parenting Behaviors

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Introduction

• Research has begun to explore the relationships between maternal self regulation (e.g., executive functioning [EF], effortful control) and parenting behavior, for example:

- Lower maternal working memory has been associated with increased maternal negative reactivity in the presence of challenging child behaviors³
- Increased levels of maternal inattention has been associated with inconsistent parenting¹

• There are multiple inter-related, but distinct aspects of EF (e.g., inhibition and working memory)⁷, as well as multiple different aspects of parenting (e.g., expressions of negative affect and intrusiveness/insensitivity)

• However, research has only examined one aspect of self regulation and/or one aspect of parenting

The Current Study:

• To address the limitations in past research, we examined longitudinal associations between two aspects of maternal EF and two aspects of parenting using structural equation modeling (SEM)

- Broadly, it was anticipated that maternal EF would predict later parenting behaviors. Specifically:
 - Better maternal working memory was expected to predict fewer negative parenting behaviors
 - Poorer maternal inhibition was expected to predict more negative parenting behaviors

Methods

Participants:

- 120 mothers and their infants participated in a larger longitudinal study
 - 82 dyads completed the four month and ten month visits
- 54.5% of infants were female; 45.5% were male
- Families were predominately Caucasian (69.4%), with 11.6% self-identifying as Hispanic and 13.2% as African American
- Mean maternal age was 27.82 (SD = 6.32, range = 17-42)
- 57.3% of the families were economically stressed, with 23.6% of families at or below the poverty line

Methods

Measures & Procedures:

• To assess maternal working memory, mothers completed the following measures at four months postpartum:

- Verbal Fluency task of the Delis-Kaplan Executive Function System (D-KEFS)⁴
- Letter-Number Sequence task of the Wechsler Adult Intelligence Scale (WAIS-IV)⁸

• To assess maternal inhibition, mothers completed the following measure at four months postpartum:

- Color-Word Interference task of the Delis-Kaplan Executive Function System (D-KEFS)⁴

• At ten months postpartum, mother-infant dyads participated in a series of structured tasks including a free play task in which no toys were provided

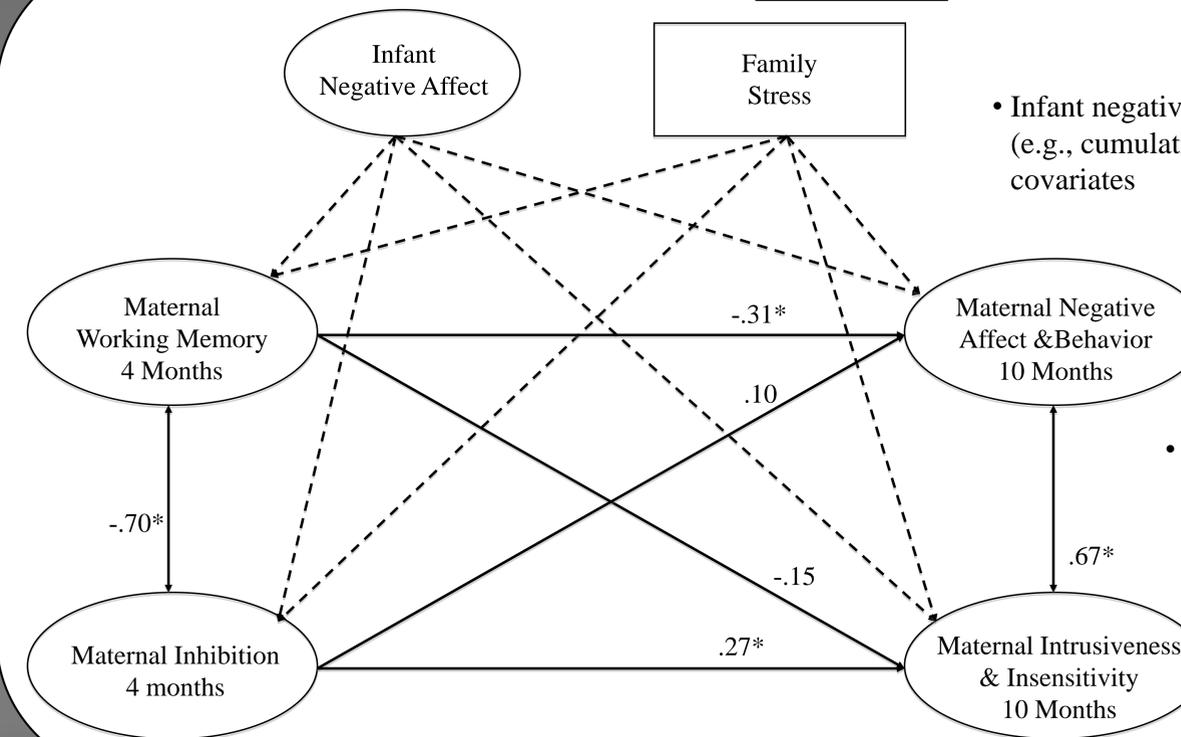
• Videos of the interaction were later coded using the Parent Child Early Relational Assessment (PCERA)² coding scheme

- Coders rated maternal use of 13 parenting behaviors
- 5 behaviors comprised aspects of negative affect and behavior (e.g., angry, hostile tone of voice, criticism of child; ICC = .70)
- 8 behaviors comprised aspects of intrusiveness and insensitivity (e.g., rigid parenting style, inconsistent parenting; ICC = .77)

• In addition, the following constructs were included as covariates:

- Infant negative affect (measured at four and ten months postpartum via the Infant Behavior Questionnaire Revised [IBQ-R]⁶)
- Contextual stressors (measured at four months postpartum via demographics questionnaires and the Structured Clinical Interview for the DSM-IV-TR [SCID]⁵)

Results



• Infant negative affect and other contextual stressors (e.g., cumulative risk, home chaos) were included as covariates

• Results indicated a well fitting model

- $X^2(85) = 81.04, p > .05; CFI = .95; SRMR = .05; RMSEA = .00 (.00 - .05)$

Discussion

• To our knowledge, this is one of the first studies to demonstrate differential relationships between distinct aspects of EF and distinct parenting behaviors.

• The results of this study suggest that the various aspects of maternal EF have independent contributions on the development of later parenting behaviors

• Findings also suggest that the efficacy of parenting interventions might be enhanced by targeting specific maternal EF skills

• Future studies could examine additional aspects of self regulation and parenting to further assess the relationships between these two constructs.

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