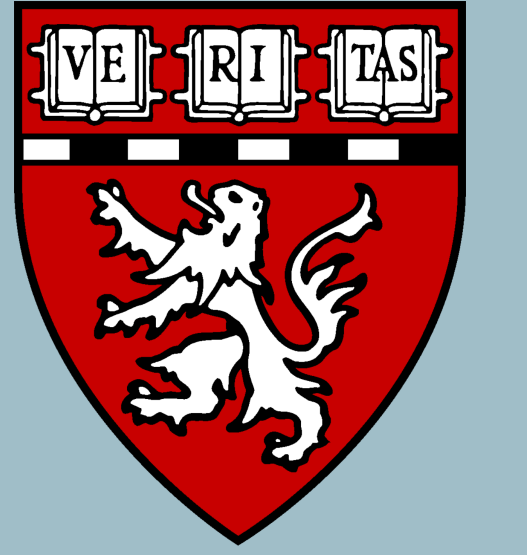


Maternal COVID-19-Related Experiences, Parenting Stress, and Self-Efficacy: Associations with Infant Neurodevelopment



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BACKGROUND

- Research examining pandemic-related experiences and infant development yields mixed results, with some suggesting that COVID-19-related experiences are associated with poorer neurodevelopmental outcomes, while others have found no influence (Huang et al., 2021; Sperber et al., 2023).
- Higher levels of parenting stress are associated with poorer infant neurodevelopment (Kim et al., 2016; Roberts et al., 2021).
- Maternal self-efficacy, mothers' self-assessed confidence in their competence in the parenting role, has been positively linked to developmental outcomes (Bandura, 1989; McDonald et al., 2016).

RESEARCH AIMS

- To assess whether maternal COVID-19-related experiences, parenting stress, and maternal self-efficacy are associated with infant neurodevelopment when infants were between 8 to 10 months of age.
- To examine the moderating effect of maternal self-efficacy between maternal COVID-19-related experiences and infant neurodevelopment.



METHODS

PARTICIPANTS

- 122 women from the Perinatal Experiences and COVID-19 Effects (PEACE) Study
- Most participants were White (95.9%), well-educated (college or higher: 96.7%), and on average 32.6 years old ($SD = 3.6$)

SETTING

- Online surveys were administered between November 2020 and August 2022

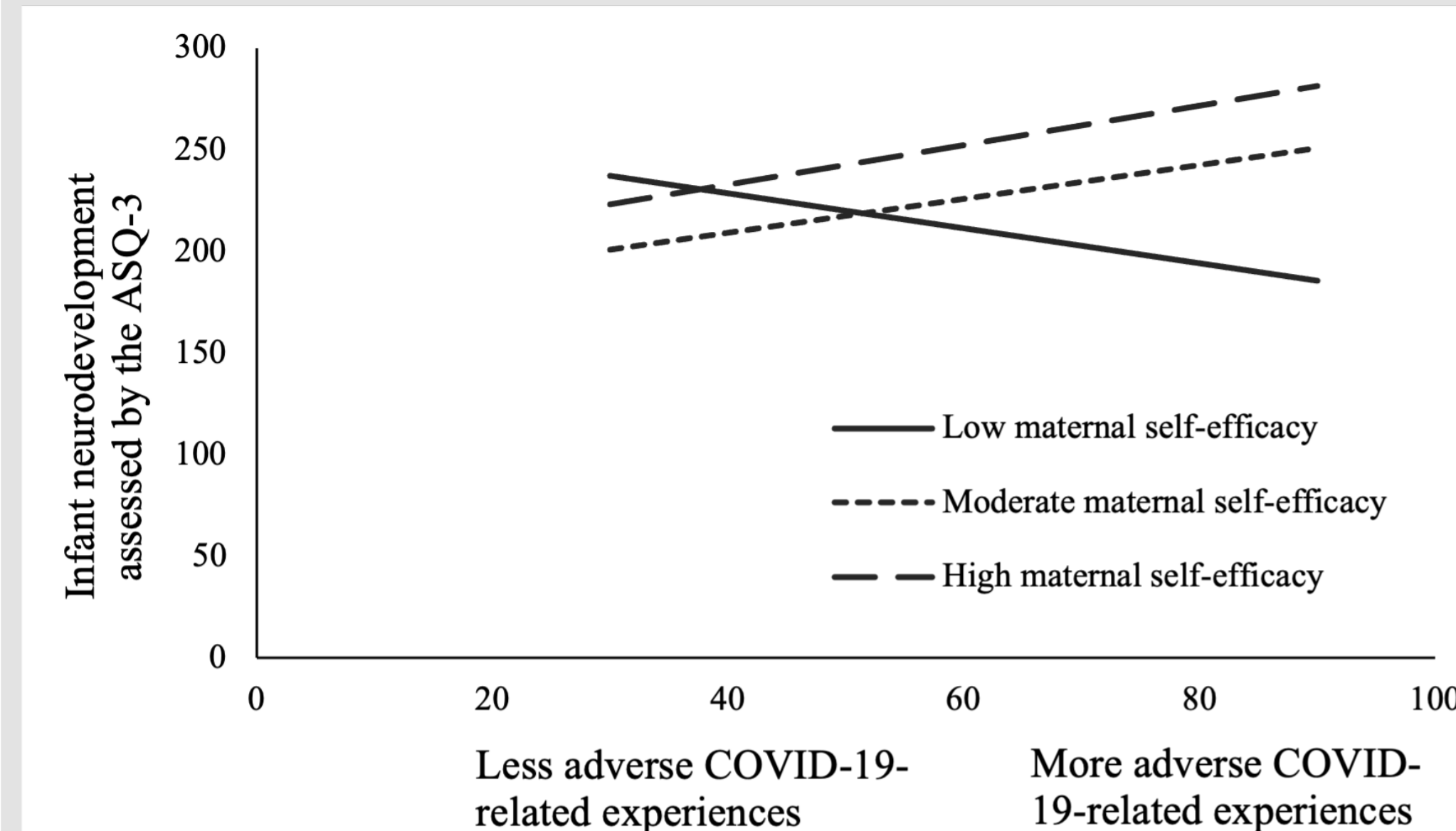
MEASURES

- COVID-19-Related Experiences
 - Self-developed measure
 - The composite total score of four dimensions (i.e., COVID-19-related health, risk, resource worries, and feelings of grief) was used
 - Example item: "Have your physical/mental/emotional health been influenced by COVID-19?"
- Parenting Stress
 - Parenting Stress Index (Abidin, 2012)
 - Example item: "I feel trapped by my responsibilities as a parent."
- Maternal self-efficacy
 - Maternal Self-Efficacy Scale (Teti & Gelfand, 1991)
 - Example item: "How good are you at understanding what your baby wants or needs?"
- Infant Neurodevelopment
 - Ages and Stages Questionnaire, Third Edition (ASQ-3) maternal report (Squires et al., 2009)
 - The composite total score of five developmental domains (i.e., communication, gross motor, fine motor, problem solving, and personal-social) was used
 - Example items: "Does your baby repeat the same sounds back to you?" (communication); "After watching you hide a small toy under a piece of paper, does your baby find it?" (problem solving)
- Covariates
 - Sociodemographic characteristics
 - Anxiety symptoms: Generalized Anxiety Disorder Scale (Spitzer et al., 2009)
 - Depression symptoms: Center for Epidemiological Studies - Depression (Radloff, 1977)

ANALYSIS

- Hierarchical regression analysis was conducted using SPSS 28.0

RESULTS



- More adverse COVID-19-related experiences ($b = 0.95$, $SE = 0.27$, $p < 0.05$) and higher levels of maternal self-efficacy ($b = 3.29$, $SE = 0.26$, $p < 0.05$) were associated with better infant neurodevelopment.
- Parenting stress showed no effect on the ASQ-3 score ($b = -0.46$, $SE = 0.33$, $p = 0.17$).
- A significant interaction effect was observed ($b = 0.18$, $SE = 0.20$, $p < 0.05$):
 - For mothers with moderate to high levels of self-efficacy, more adverse COVID-19-related experiences were associated with better infant neurodevelopment.
 - For mothers with low levels of self-efficacy, more adverse COVID-19-related experiences were associated with poorer developmental outcomes in infants.

DISCUSSION

IMPLICATIONS

- *Research:* Examining how racial and ethnic factors influence maternal self-efficacy and its impact on infant neurodevelopment in the context of adversity such as the COVID-19 pandemic.
- *Practice:* Interventions aimed at fostering maternal self-efficacy and addressing specific stressors related to the pandemic can be valuable in promoting positive developmental trajectories for infants born during the pandemic.

LIMITATIONS

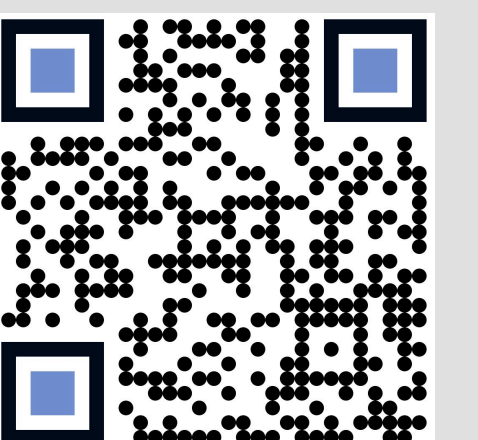
- The homogeneous sample
- Maternal self-reported data
- Cross-sectional design
- The study did not include other potential confounding variables associated with maternal self-efficacy, such as children's birth order.

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(References available upon request)