



Maternal Emotion Regulation and Infant Negative Affect: Direct and Indirect Links through Maternal Internalizing Problems

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Background

- Elevated negative affectivity in childhood is associated with increased risk for internalizing¹ and externalizing problems², as well as poor academic³ and social⁴ adjustment.
- Negative affect generally stabilizes around age two⁵, highlighting the importance of early influences.
- Previous work has identified a variety of factors that influence children's early negative affectivity, including maternal psychopathology⁶, and negative parenting⁷.
- Little work has investigated the potential influence of maternal emotion regulation on infant negative affect.
- Difficulties with emotion regulation, or the processes employed to influence the experience and expression of emotions⁸ have been linked to internalizing disorders⁹:
 - Suppression (inhibition of emotional expression) predicts more negative emotion while reappraisal (changed cognitions to alter emotional experience) predicts greater positive emotion.¹⁰
- Given this evidence, maternal ER may be directly influencing infant NA, or its effects may be mediated by maternal internalizing problems.
- The current study examines the direct and indirect effects of specific maternal emotion regulation strategies on infant negative affect, through maternal internalizing problems.

Hypotheses

- Lower use of reappraisal and higher use of suppression were expected to predict higher maternal internalizing problems.
- Greater maternal internalizing problems were expected to predict higher infant negative affect.
- Lower maternal reappraisal and higher maternal suppression were expected to predict higher infant negative affect either directly or indirectly through maternal internalizing problems.

Method

Participants

- Mothers (N=84) from a rural community participated with their healthy, full-term infants.
 - Maternal ethnicity: 70.2% Caucasian, 13.1% Latina, 10.7% African-American, 6% other
 - Mothers mean age: 27.67 years ($SD = 6.66$)
 - Mean income-to-needs ratio of 2.44 ($SD = 1.92$)
- Infants: 58.3% female, 41.7% male

Measures

- Emotion Regulation Questionnaire¹⁰ (ERQ)
 - Reappraisal and suppression subscales
- Maternal Internalizing Composite:
 - Beck Anxiety Inventory¹¹ (BAI)
 - Beck Depression Inventory-II¹² (BDI-II)
- Infant Behavior Questionnaire-Revised¹³ (IBQ-R)
 - Negative affect subscale
- Cumulative Risk Index
 - One point for each of the following criteria: past or current maternal major depressive episode maternal education less than high school, teen motherhood (17-19 years), single parenthood, and household income at or below poverty threshold.

Procedure

- Mothers completed the ERQ four months postpartum. Past or current major depressive episode was assessed in a structured clinical interview.
- At 6 and 8 months, mothers completed the BDI, BAI, & IBQ-R.
- Primary regression analyses were conducted in EQS 6.1¹⁴
 - Indirect effects estimated using effects decomposition feature.
 - Maximum likelihood estimation used to model missing data (16%).
 - Covariates: gender, cumulative risk & 4 month infant NA.

Results

- Higher maternal reappraisal predicted lower infant NA ($b^* = -.56$, $z = -2.32$, $p < .05$), lower maternal suppression did not significantly predict infant NA ($b^* = -.07$, $z = -.31$, $p > .05$).
- Lower maternal reappraisal ($b^* = -.29$, $z = -2.44$, $p < .05$) and higher maternal suppression ($b^* = .23$, $z = 2.83$, $p < .05$) predicted higher maternal internalizing.
- Higher maternal internalizing predicted higher infant NA ($b^* = 0.86$, $z = 3.74$, $p < .05$).

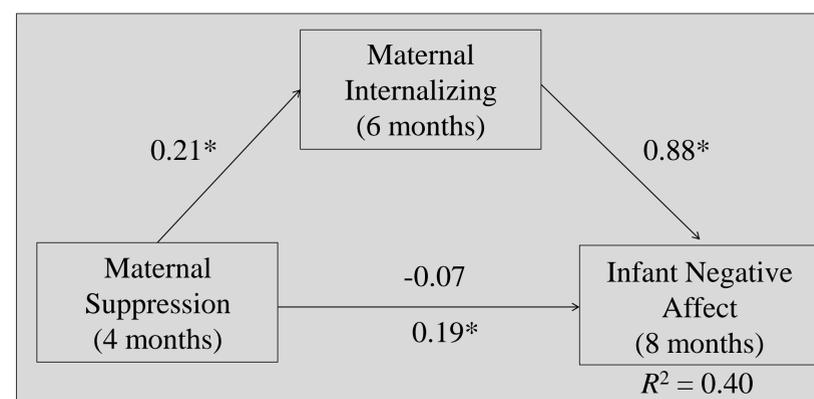
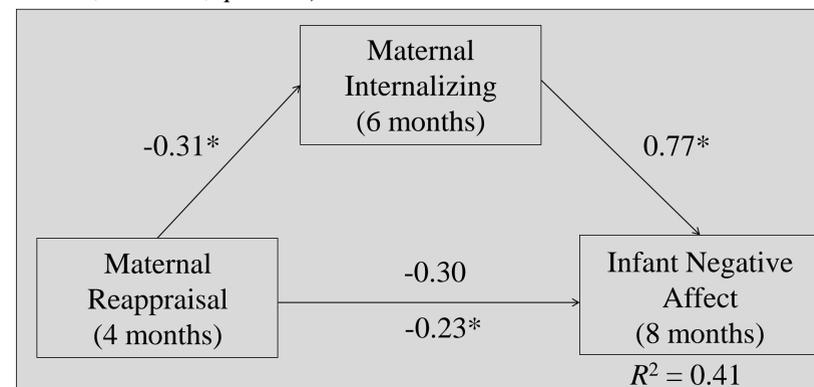


Figure 1. Indirect effects of Maternal Emotion Regulation Strategies on Infant Negative Affect through Maternal Internalizing. Direct effects, with maternal internalizing in the model, are above the line, the indirect effects are below the line. * $p < .05$

Conclusions

- Findings support the importance of maternal emotion regulation in the emergence of infant negative affect, indirectly through maternal internalizing difficulties.
- These results suggest that maternal emotion regulation will be an important factor to consider in future research on maternal influences in early childhood.
- This study did not distinguish between maternal depression and maternal anxiety. Future studies should consider differential interactions between emotion regulation and maternal anxiety and depression in predicting infant negative affect.
- Finally, these results indicate that parenting interventions targeting maternal emotion regulation may improve child outcomes.

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References

- Joiner Jr, T. E., Catanzaro, S. J., & Laurent, J. (1996). Tripartite structure of positive and negative affect, depression, and anxiety in child and adolescent psychiatric inpatients. *Journal of Abnormal Psychology, 105*(3), 401.
- Eisenberg, N., Guthrie, I. K., Fabes, R. A., Shepard, S., Losoya, S., Murphy, B. C., Jones, S., Poulin, R., & Reiser, M. (2000). Prediction of elementary school children's externalizing problem behaviors from attentional and behavioral regulation and negative emotionality. *Child Development, 71*(5), 1367-1382.
- Stright, A. D., Gallagher, K. C., Kelley, K. (2008). Infant temperament moderates relations between maternal parenting in early childhood and children's adjustment in first grade. *Child Development, 79*(1), 186-200.
- Sallquist, J. V., Eisenberg, N., Spinrad, T. L., Reiser, M., Hofer, C., Liew, J., Zhou, Q., & Eggum, N. (2009). Positive and negative emotionality: Trajectories across six years and relations with social competence. *Emotion, 9*(1), 15-28.
- Lemery, K. S., Goldsmith, H. H., Klfnert, M. D., & Mrazek, D. A. (1999). Developmental models of infant and childhood temperament. *Developmental Psychology, 35*(1), 189-204.
- Pluess, M., Velders, F. P., Belsky, J., van IJzendoorn, M. H., Bakermans-Kranenburg, M. J., Jaddoe, V. W., ... & Tiemeier, H. (2011). Serotonin transporter polymorphism moderates effects of prenatal maternal anxiety on infant negative emotionality. *Biological Psychiatry, 69*(6), 520-525.
- Cole, P. M., Teti, L. O., Zahn-Waxler, C. (2003). Mutual emotion regulation and the stability of conduct problems between preschool and early school age. *Development and Psychopathology, 15*(1), 1-18.
- Paulussen-Hoogbeem, M. C., Stams, G. J. J., Hermanns, J., & Peetsma, T. T. (2007). Child negative emotionality and parenting from infancy to preschool: A meta-analytic review. *Developmental Psychology, 43*(2), 438.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of general psychology, 2*(3), 271.
- Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and emotional problems. *Personality and Individual Differences, 30*(8), 1311-1327.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*, 348-362.
- Beck, A. T., & Steer, R. A. (1990). *BAI, Beck anxiety inventory: manual*. San Antonio, TX: Psychological Corporation.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck depression inventory-II*. San Antonio, TX: Psychological Corporation, 1, 82.
- Gartstein, M. A., & Rothbart, M. K. (2003). Studying infant temperament via the revised infant behavior questionnaire. *Infant Behavior and Development, 26*(1), 64-86.
- Bentler, P. M. (2006). EQS 6.1 [Computer software]. Encino, CA: Multivariate Software.