



# Research Week 2023

## Discrimination and development: the effect of maternal adversity on child neurobehavioral development

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### Keywords

Infant, Child, Pregnancy, Temperament, Perceived Discrimination, Infant Behavior, Brain, Parents

### Abstract

#### Background:

Early environmental factors, particularly adversities experienced by the birthing parent during gestation, can have a profound effect on child health, influencing both fetal brain development and infant behavior. The mechanisms by which such adversity contributes to child development, however, are not fully established.

We prospectively examined the effect of maternal perceived discrimination on maternal distress and on offspring 1-month-old temperament. We hypothesized that maternal experiences of discrimination would worsen maternal distress and that maternal distress would predict alterations in infant temperament.

#### Methods:

Pregnant individuals (N=303) were recruited through Oregon Health & Science University. Self-reported maternal adversity was assessed during the 2<sup>nd</sup> and 3<sup>rd</sup> trimester and 1-month postpartum using the Beck Anxiety Inventory, Pregnancy Anxiety Questionnaire (PRAQ), State-Trait Anxiety Inventory, Everyday Discrimination Scale, Macarthur Scale of Subjective Social Status, and Multidimensional Scale of Perceived Social Support. At 1-month post-partum, infant behavior was assessed by the parent-rated Infant Behavioral Questionnaire.

#### Results:

Preliminary data support the hypotheses. Perceived discrimination was correlated with greater maternal anxiety (PRAQ, State-Trait), controlling for social status and social support ( $\beta$ s=0.26-0.44,  $p$ s<.049). In multiple regression analyses, maternal perceived discrimination predicted infant negative affect (sadness, distress to limitations, falling reactivity) ( $\beta$ s=-0.27-0.37,  $p$ s<.046).

## Discussion:

Exposures during gestation can influence both parent distress and offspring temperament. As levels of discrimination are disproportionately experienced by underserved populations, maternal adversity may particularly challenge those children. Further study into maternal inflammation as a possible mechanism of risk transmission are promising next steps to provide a scope for intervention development.