

## **Lifetime Exposure to Intimate Partner Violence and Proinflammatory Cytokine Levels Across the Perinatal Period.**

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### **Abstract**

#### ***BACKGROUND:***

Intimate partner violence (IPV) is a public health concern, affecting one-third of US women. Prior research suggests an association between exposure to IPV and poor maternal perinatal health, but the underlying biological correlates are not well understood. This study examined the relationship between exposure to IPV and proinflammatory cytokine levels, a candidate mechanism accounting for poor psychiatric and obstetric outcomes, across the perinatal period.

#### ***MATERIALS AND METHODS:***

Data were obtained from a prospective, longitudinal cohort study of 171 women receiving obstetrical care from a hospital-based practice serving a predominantly low-income minority population. Participants completed questionnaires on IPV exposure, psychiatric symptoms, and psychosocial and obstetric factors and provided blood samples at 18 and 32 weeks of gestation and 6 weeks and 6 months postpartum. Serum levels of interleukin-6 (IL-6) and tumor necrosis factor alpha (TNF- $\alpha$ ) were assayed via enzyme-linked immunosorbent assay.

#### ***RESULTS:***

Thirty-five (20.5%) women reported lifetime exposure to IPV and 7 (4.1%) reported being physically hurt in the preceding 12 months (4 while pregnant). Lifetime exposure to IPV was associated with increased likelihood of experiencing perinatal depression and smoking during pregnancy. Women with a history of IPV had significantly higher levels of TNF- $\alpha$  at 18 weeks ( $z = -2.29$ ,  $p < 0.05$ ), but significantly smaller changes in levels of IL-6 ( $\beta = -0.36$ ,  $p = 0.04$ ) across time.

#### ***CONCLUSION:***

Lifetime exposure to IPV was associated with a range of adverse mental health outcomes and may affect proinflammatory cytokine levels in pregnancy