

Psychological distress and salivary cortisol covary within persons during pregnancy

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ABSTRACT

Summary: The mechanisms whereby maternal stress during pregnancy exerts organizational effects on fetal development require elaboration. The aim of this study was to assess the plausibility of cortisol as a biological link between maternal psychological distress during pregnancy and fetal development. Previous research has resulted in equivocal findings for between-persons differences in stress and cortisol. Ecological momentary assessment was used to simultaneously assess mood and cortisol 5 times daily

for 3 days in 83 women (gestational ages 6—37 weeks). Results from multilevel analysis indicated a robust within-person association between negative mood and cortisol. For each 1.0% increase in negative mood there was a corresponding 1.9% increase in cortisol. This association was unaffected by advancing gestational age. The results suggest that cortisol is a plausible biological mechanism for transducing the effects of maternal psychological distress during pregnancy to fetal development.

Keywords: Pregnancy; Cortisol; Stress; Psychological distress; Anxiety; Depression; Ecological momentary assessment; Saliva; Diurnal