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**IMPACT OF MOTHER'S DEPRESSION, ANXIETY, EMOTION DYSREGULATION,  
AND EARLY CHILDHOOD TRAUMA ON HAIR CORTISOL LEVELS DURING  
PREGNANCY**

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**ABSTRACT**

Depression and anxiety are prevalent among pregnant mothers, with as many as 18.4% of pregnant mothers experiencing depression (Gavin et al., 2005) and 18.8% of women presenting severe anxiety symptoms (George et al., 2013) during pregnancy. Therefore, it is important to understand the implications maternal mental health may have on future maternal and offspring health. Understanding the physiological basis of maternal mental health and stress is also important as it may lead to better detection of mothers in need of support. This research was informed by the Fetal Programming model, which posits that newborn neurobehavior may be altered in utero due in part to maternal mental health and stress levels. Thus, we have selected to study maternal mental health in relation to prenatal hair cortisol levels as cortisol is released in the body during an active stress response. We used maternal self-reports and chronic hair cortisol levels to better understand whether anxiety, depression, trauma, and emotion dysregulation have functional consequences with respect to the mother's chronic cortisol output. We then examined whether higher levels of emotional dysregulation change the relationships between anxiety, depression, and trauma on chronic cortisol levels. One hundred and sixty-two women (26-40 weeks gestation) were recruited to participate in a study on how a woman's mood during pregnancy may be related to infant behavior after birth. Participants completed the Difficulties in Emotion Regulation Scale, Center for Epidemiological Studies - Depression Scale, State-Trait Anxiety Inventory, and Childhood Trauma Questionnaire, and provided hair samples which were measured for cortisol levels during the past 6 months of their pregnancy. Higher levels of maternal depression, trait anxiety, and childhood trauma all had significant positive associations with elevated prenatal maternal hair cortisol concentrations. Emotion dysregulation did not moderate any of the relationships between maternal mental health and prenatal hair cortisol concentrations. These results are important as understanding how the events that have occurred during a mother's life and the prenatal period could impact her stress hormone levels.