

Maternal mental health influence on mother-baby cortisol levels during neonatal period

Rosana Tristao¹, Luísa Marques¹, Laura Vilela¹, Elaine Neiva², Andrea Quesada³, José Alfredo Jesus¹, and Elvidina Adamson-Macedo⁴

¹University of Brasilia

²University of Brasilia Institute of Psychology

³University of Fortaleza

⁴University of Wolverhampton Department of Nursing Burton Health Education Centre

May 29, 2020

Abstract

Objective The aim of this study was to investigate relations (or coactions) among maternal mental health measures, clinical and socio-demographic factors and salivary cortisol level of hospitalized mothers and babies. **Design** A cross-sectional observational and exploratory study at a tertiary referral centre. **Setting** Maternal and Neonatal Care Ward of the University Hospital of Brasilia, Brazil **Population** 89 mother-baby dyads at post-delivery period. **Methods** Dyads were recruited by convenience during the first 48 hours after birth. **Main outcome measures** The research protocol included maternal sociodemographic and clinical data, screening for maternal depression, self-efficacy and gestational stress, besides salivary cortisol collection from both mother and baby. **Results:** Exploratory analysis indicated a relation between high gestational stress, high depression symptoms, low self-efficacy perception and high baby's cortisol level ($p < 0.05$). Maternal cortisol was positively related to infant cortisol and was indirectly influenced by maternal perception of self-efficacy in reading the baby's behavior, especially for knowing what the baby likes, or what pleases her/him, maternal situational beliefs (within the concept of parental self-efficacy). Four binary logistic regression models were performed considering maternal mental state variables as factors and clinical and socio-demographic variables as covariates in order to predict the cortisol level of infants. Only two were strong predictors, namely maternal depression and higher gestational stress. **Conclusion** The findings suggest an important role of maternal mental health in neonatal salivary cortisol levels in the first days of life, which can be considered an early clinical marker for the infant's reaction to maternal mental status.

Hosted file

BJOG Tristao et al 2020 MMH Cortisol Complete.doc available at <https://authorea.com/users/327727/articles/455173-maternal-mental-health-influence-on-mother-baby-cortisol-levels-during-neonatal-period>





