

**Reward Processing and Perceived Life Stress' s  
Sublime Balance: A case for motherhood**

by

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## Abstract

Numerous studies have found that elevated levels of perceived stress predict decreased hedonic capacity. Most recently however, research has demonstrated that stress has different effects on the reward processing depending on the nature of the stressor (acute/chronic) and the phase of the reward processing (anticipatory or consummatory). In the particular case of the maternal brain, the entire reward process play a key role in maternal sensitivity and the well-being of the mother, but at the same time the perinatal period is frequently a stressful and demanding time. Breastfeeding has been associated to providing somewhat protection of negative moods and stress response through the hormones present on lactation.

This was the first study to research about the interaction effect between perceived stress and lactational status on the reward processing. It was a first step to understand the relationship between perceptual stress and two facets of the reward processing (anticipatory and consummatory pleasure) in exclusively breastfeeding mothers, exclusively formula feeding mothers and healthy no mothers. By using self-reported measures for both, perceived stress (PSS-10) and pleasure (TEPS, Gard et al., 2006) in 133 healthy participants from the community, this study found that there was a significant interaction effect between level of perceived stress and lactancy status on the level of consummatory pleasure. Exclusively breast-feeding mothers showed the highest level of consummatory pleasure and the lowest level of perceived stress between the three groups. It was demonstrated that at high levels of stress but not at low levels, there were differences in the mean level of consummatory pleasure between breastfeeding mothers and no mothers and between formula feeding mothers and no mothers. Even though no significant differences were found in the consummatory mean level between breastfeeding and formula feeding mothers, the study demonstrated that the group of breastfeeding mothers was the only group between the three groups, with no significant negative association between consummatory pleasure and stress. Results from this research are important in the effort to understand the sublime's balance between perceived stress and reward processing and provides promising insights into potential mechanisms linking stress to anhedonia, and ultimately to depression.