

Supplemental Information

Table S1. fMRI Study Sample Description: Comparison with Mothers not Selected for fMRI Study

Variable	fMRI Study (<i>n</i> = 22)	Non-fMRI Study (<i>n</i> = 80)	Difference
	M (SD) Range	M (SD) Range	
Cortisol - Intercept	-2.21 (.69) -2.97 to -.40	-1.32 (1.00) -3.00 to .80	$t(100) = 3.95,$ $p < .001$
Cortisol - Slope	-.16 (.10) -.31 to .10	-.10 (.17) -.47 to .33	$t(100) = 1.64,$ $p = .11$
Cortisol - Quadratic	.005 (.05) -.14 to .07	-.05 (.07) -.20 to .11	$t(100) = -3.46,$ $p = .001$

(Demographic and psychological variables showed *ns* group differences)

Differences between mothers selected for the fMRI study vs. those not selected suggest current findings are based on a relatively milder sample of HPA reactivity that could dilute, but probably not inflate, estimated differences in neural response.

Table S2. Associations among Maternal Depression, HPA, and Neural Response Measures

Depression Measure	Association with HPA Terms	Association with Neural Response (own cry>control sound)	Effect on HPA-Neural Response Associations
Diagnostic Criteria (during perinatal period)			
Major Depressive Disorder vs. No Diagnosis	<i>ns</i> group differences	Reduced thalamostriatal response (see 1)	<i>ns</i>
Self-Reported (current) Symptoms			
CES-D Score	$r = .27$ with intercept $r = .14$ with slope $r = -.48$ with quadratic	Reduced prefrontal, thalamostriatal response (see 1)	Same activations remain (size reduced – see below for changes in representative cortisol quadratic-related clusters) ACC: 6441 to 2336 mm ³ PAG-Cerebellum: 10758 (1 cluster) to 1459 and 3027 mm ³ (2 clusters) L Insula-OFC: 6580 to 3130 mm ³ R Insula-OFC: 8066 to 1296 mm ³ L Supramarginal G: 5571 to 4738 mm ³

ACC, anterior cingulate cortex; CES-D, Center for Epidemiologic Studies Depression scale; G, gyrus; HPA, hypothalamic-pituitary-adrenal; L, left; OFC, orbitofrontal cortex; PAG, periaqueductal gray; R, right.

Bolded value indicates $p < .05$.

1. Laurent HK, Ablow JC (2011): A cry in the dark: Depressed mothers show reduced neural response to their own infant's cry. *Soc Cogn Affect Neurosci*. Epub Jan 5, 2011: doi: 10.1093/scan/nsq091.