

Urgent Engagement in 9/11 Pregnant Widows and Their Infants: Transmission of Trauma

Supplement A: Analyses of Behavioral Frequencies

<https://childadolescentpsych.cumc.columbia.edu/professionals/research-programs/communication-sciences-lab>

Hypothesis (2) Analyzing frequencies of behaviors, 9/11 mothers show dampened facial affect. Analyses of frequencies of other maternal and infant behaviors are exploratory.

We tested differences in 9/11 vs. control groups in frequencies of seconds of behaviors with chi-square tests (see Supplemental Tables below). Unlike time-series models, which control for the fact that each second is not an independent sample, tests of frequencies of seconds are likely to be inflated. We interpret frequencies conservatively, evaluating both the size of the chi-square and relative differences in frequencies of behavior between the two groups.

There were no interpretable differences in maternal facial affect (see Table 1 below).

Testing frequencies of infant gaze, facial affect and vocal affect, only differences in infant facial affect were interpretable (see Tables below).

Testing frequencies of mother gaze, facial affect, touch and spatial orientation, only differences in mother spatial orientation were interpretable (see Tables below).

Table 1. *Mother Facial Affect Frequencies for 9/11 vs. Control Mothers*

Mother Facial Affect	9/11	Control
Negative Face	1.4%	1.0%
Woe Face	0.5%	1.0%
Neutral	1.4%	1.3%
Positive Attention	50.3%	46.4%
Oh Face	2.4%	1.6%
Smile 1	23.2%	24.4%
Smile 2	14.1%	18.1%
Smile 3	3.7%	4.4%
Mock Surprise	2.9%	1.8%

Note.

$\chi^2 = 39.563, p < .001$. We choose not to interpret. The differences in frequencies are very small.

Table 2. *Maternal Spatial Orientation Frequencies for 9/11 vs. Control Mothers*

Mother Spatial Orientation	9/11	Control
Loom	31.0%	19.4%
Forward	51.8%	47.8%
Upright	17.2%	32.8%

Note.

$\chi^2 = 199.693, p < .001$ We choose to interpret differences in frequencies of loom (31.0 vs. 19.4) and upright (17.2 vs. 32.8)

Table 3. *Infant Facial Affect Frequencies for 9/11 vs. Control Mothers*

Infant Facial Affect	9/11	Control
High Negative	1.7%	2.4%
Low Negative	6.1%	6.3%
Neutral/Interest	70.1%	76.0%
Low Positive	15.6%	9.9%
High Positive	6.6%	5.4%

Note.

$\chi^2 = 53.026, p < .001$. We choose to interpret frequencies of low positive facial affect (15.6 vs. 9.9); neutral/interest (70.1 vs. 76.0).

Table 4. *Infant Vocal Affect Frequencies for 9/11 vs. Control Mothers*

Infant Vocal Affect	9/11	Control
Cry	0.0%	0.6%
Angry/Protest	1.3%	0.3%
Fuss/Whimper	6.2%	9.7%
No Vocalization	79.1%	79.2%
Neutral/Positive	13.0%	9.7%
High Positive	0.4%	0.5%

Note.

$\chi^2 = 76.009, p = < .001$. We choose not to interpret.

Table 5. *Infant Gaze-On Frequencies for 9/11 vs. Control Mothers*

Infant Gaze	9/11	Control
Gaze-off	52.1%	57.1%
Gaze-on	47.9%	42.9%

Note.

$\chi^2 = 14.066, p = < .001$. We choose not to interpret.

Table 6. *Mother Gaze-On Frequencies for 9/11 vs. Control Mothers*

Mother Gaze	9/11	Control
Gaze-off	14.2%	12.5%
Gaze-on	85.8%	87.5%

Note.

$\chi^2 = 3.758, p = < .001$. We choose not to interpret.

Table 7. *Mother Touch Frequencies for 9/11 vs. Control Mothers*

Mother Facial Affect	9/11	Control
Intrusive Touch	0.0%	2.1%
Rough Touch	0.4%	2.7%
Centripetal Touch	9.7%	8.4%
Object-Mediated	1.7%	1.6%
Oral Touch	0.8%	0.7%
Jiggle-Bounce	7.2%	8.1%
Caregiving	0.9%	0.7%
No Touch	28.7%	31.3%
Playful Touch	10.6%	10.5%
Static Touch	37.0%	32.5%
Affectionate Touch	3.0%	1.4%

Note.

$\chi^2 = 102.340, p = < .001$. We choose not to interpret.

Table 8. *Maternal Chase and Dodge Frequencies for 9/11 vs. Control Mothers*

Chase and Dodge	9/11	Control
Does not occur	96.7%	96.5%
Occurs	3.3%	3.5%

Note.

$\chi^2 = 0.065, p = 0.799$.