

Supplement Table 1: Spearman correlations between Mullen Scales of Early Learning (MSEL), Vineland Adaptive Behavior Scales (VABS), and ADOS- Calibrated Severity Score (ADOS-CSS).

	<i>MSEL DQ Composite</i>	<i>VABS Composite score</i>	<i>ADOS^a CSS</i>	<i>MSEL DQ Verbal Subscale</i>	<i>MSEL DQ Nonverbal Subscale</i>	<i>VABS Communication Subscale</i>	<i>VABS Daily Living Subscale</i>	<i>VABS Socialization Subscale</i>	<i>VABS Motor Skills Subscale</i>
<i>MSEL DQ Composite</i>	1.00								
<i>VABS Composite score</i>	0.68	1.00							
<i>ADOS^a CSS</i>	-0.19	-0.10	1.00						
<i>MSEL DQ Verbal Subscale</i>	0.96	0.63	-0.18	1.00					
<i>MSEL DQ Nonverbal Subscale</i>	0.93	0.67	-0.19	0.79	1.00				
<i>VABS Communication Subscale</i>	0.79	0.84	-0.15	0.78	0.70	1.00			
<i>VABS Daily Living Subscale</i>	0.49	0.82	-0.08	0.42	0.52	0.61	1.00		
<i>VABS Socialization Subscale</i>								1.00	
<i>VABS Motor Skills Subscale</i>	0.56	0.82	-0.09	0.54	0.53	0.74	0.61	1.00	
	0.46	0.85	-0.02	0.39	0.51	0.54	0.66	0.53	1.00

^a ADOS= Autism Diagnostic Observational Schedule

Supplemental Table 2: Pearson Correlations Between and Within Pollutants For Pregnancy and the First Year of Life**

		All Pregnancy					
		TRP	PM2.5	PM10	Ozone	NO2	
1st year of life	TRP	0.91	0.09	0.05	-0.33	0.41	
	PM2.5	-0.06	0.54	0.69	-0.21	0.5	
	PM10	-0.02	0.78	0.75	0.04	0.49	
	Ozone	-0.37	0.24	0.22	0.71	-0.45	
	NO2	0.34	0.48	0.5	-0.35	0.85	

* Light grey shading denotes correlates between pollutants during pregnancy, dark grey shading denotes correlations between pollutants during the first year of life, white cells indicate correlation of the pollutant across time

Supplemental Table 3: Further Adjusted Association of Air Pollutant Exposure During Entire Pregnancy and Year 1 of Life with VABS, MSEL, and CSS Scores

Time	Score	Air Pollutant Exposure ^b (N=327)									
		NO ₂	95% CI	O ₃	95% CI	PM ₁₀	95% CI	PM _{2.5}	95% CI	NRAP	95% CI
Prenatal	VABS Composite Score	-13.13%	(-19.57%, -2.45%)*	-0.68%	(-8.50%, 7.18%)	-8.63%	(-26.93%, 9.98%)	2.98%	(-5.17%, 11.22%)	-1.09%	(-9.88%, 7.72%)
	VABS Communication Subscale	-15.80%	(-27.32%, -4.09%)*	0.39%	(-8.61%, 9.45%)	-7.67%	(-28.73%, 13.79%)	3.37%	(-6.00%, 12.87%)	-1.65%	(-11.75%, 8.49%)
	VABS Daily Living Subscale	-13.87%	(-23.79%, -3.80%)*	1.70%	(-6.03%, 9.49%)	-11.91%	(-29.91%, 6.39%)	1.59%	(-6.45%, 9.72%)	-3.38%	(-12.04%, 5.31%)
	VABS Socialization Subscale	-8.25%	(-17.32%, 0.94%)	-1.71%	(-8.64%, 5.27%)	-1.14%	(-17.54%, 15.51%)	3.20%	(-4.04%, 10.52%)	0.71%	(-7.10%, 8.54%)
	VABS Motor Skills Subscale	-3.42	(-8.02, 1.17)	-0.81	(-4.26, 2.65)	-3.30	(-11.51, 4.90)	1.57	(-2.03, 5.17)	0.53	(-3.35, 4.42)
	MSEL Composite DQ	-7.12	(-12.96, -1.29)*	0.01	(-2.70, 2.72)	-3.20	(-9.63, 3.22)	1.80	(-2.70, 6.30)	-0.69	(-1.93, 0.55)
	MSEL Verbal DQ	-8.59	(-15.27, -1.91)*	0.30	(-4.76, 5.36)	-6.18	(-18.17, 5.82)	1.54	(-3.73, 6.81)	-4.46	(-10.12, 1.20)
	MSEL Non Verbal DQ	-5.66	(-11.30, -0.02)*	-0.27	(-4.53, 3.99)	-4.27	(-14.37, 5.83)	2.14	(-2.29, 6.56)	-1.05	(-5.83, 3.73)
	ADOS CSS	0.18	(-0.23, 0.60)	0.15	(-0.17, 0.46)	0.12	(-0.62, 0.85)	0.17	(-0.16, 0.49)	0.12	(-0.22, 0.47)
	Year 1	VABS composite score	-17.3%	(-23.84%, -5.13%)*	0.43%	(-11.90%, 12.91%)	-17.05%	(-42.84%, 9.36%)	-2.16%	(-11.71%, 7.53%)	0.70%
VABS Communication Subscale		-21.3%	(-33.80%, -8.53%)*	4.79%	(-9.42%, 19.18%)	-21.24%	(-50.69%, 9.03%)	-4.48%	(-15.40%, 6.62%)	0.38%	(-9.94%, 10.74%)
VABS Daily Living Subscale		-16.31%	(-27.20%, -5.24%)*	4.00%	(-8.21%, 16.34%)	-0.10%	(-26.02%, 26.45%)	2.32%	(-7.18%, 11.94%)	-4.10%	(-12.94%, 4.77%)
VABS Socialization Subscale		-11.56%	(-21.48%, -1.49%)*	-2.10%	(-13.03%, 8.94%)	-17.57%	(-40.46%, 5.82%)	-3.94%	(-12.40%, 4.62%)	2.33%	(-5.64%, 10.33%)
VABS Motor Skills Subscale		-4.42	(-9.48, 0.64)	-1.16	(-6.62, 4.30)	-4.15	(-15.85, 7.54)	0.65	(-3.60, 4.90)	1.56	(-2.40, 5.52)
MSEL Composite DQ		-9.50	(-15.91, -3.10)*	1.12	(-3.15, 5.39)	-0.83	(-10.00, 8.33)	0.27	(-5.04, 5.58)	-0.59	(-1.85, 0.67)
MSEL Verbal DQ		-10.72	(-18.03, -3.40)*	2.67	(-5.30, 10.63)	-3.71	(-20.78, 13.36)	-0.46	(-6.66, 5.74)	-3.00	(-8.77, 2.77)
MSEL Non Verbal DQ		-8.29	(-14.49, -2.10)*	0.98	(-5.75, 7.71)	0.99	(-13.43, 15.41)	1.02	(-4.22, 6.25)	-1.70	(-6.58, 3.18)
ADOS CSS		0.33	(-0.13, 0.78)	-0.13	(-0.62, 0.36)	-0.08	(-1.13, 0.97)	-0.05	(-0.44, 0.33)	0.18	(-0.17, 0.54)

^aAll models were adjusted for gestational weeks, year of birth, sex, max education in the home, referral center, race, mother's age, prenatal smoking, season of conception and home ownership

^bPollutant effects were scaled to 2 SD of the distribution of the pregnancy average exposure: 6.82 ppb for NO₂, 11.1 ppb for O₃, 11.6 µg/m³ for PM₁₀, 6.97 µg/m³ for PM_{2.5} and 27.3 ppb for NRAP

* p<0.05

Supplement Table 4: Pearson Correlations for NO₂
 Between Each Trimester and the 1st Year of Life

NO ₂	1st Year	Trimester 1	Trimester 2	Trimester 3
1st Year	1.00			
Trimester 1	0.62	1.00		
Trimester 2	0.66	0.46	1.00	
Trimester 3	0.65	-0.03	0.48	1.00

Supplemental Table 5: Distribution of cognitive and adaptive function scores by sociodemographic characteristics and maternal smoking during pregnancy among typically developing controls.

Covariate	n (%)	VABS Composite Score mean±sd	MSEL Composite DQ Score mean±sd
Overall score	227 (100%)	105.4 ± 14.9	107.0±14.7
Sex			
Female	41 (18.1%)	111.6 ± 15.3	111.5±14.0
Male	186 (81.9%)	104.1 ± 14.5	106.0±14.7
	<i>p value</i>	<i>0.005463</i>	<i>0.02592</i>
Center			
Alta	91 (40.1%)	104.7 ± 16.0	104.2±14.6
North Bay	39 (17.2%)	104.2 ± 13.7	107.1±13.7
RC of the East	58 (25.5%)	106.1 ± 15.8	111.5±14.6
Bay Valley	39 (17.2%)	107.3 ± 12.4	106.4±15.0
Mountain	<i>p value</i>	<i>0.76</i>	<i>0.0335</i>
Race			
White	117 (51.5%)	105.8 ± 15.4	107.9±15.1
Hispanic	63 (27.8%)	105.3 ± 14.8	104.6±14.5
Other	47 (20.7%)	104.6 ± 14.2	107.8±13.8
	<i>p value</i>	<i>0.90</i>	<i>0.313</i>
Education			
Less than College	84 (37.0%)	104.67 ± 14.2	102.1±13.0
College grad	86 (37.9%)	107 ± 14.9	109.2±14.0
Grad/Prof degree	57 (25.1%)	104.1 ± 16	110.7±16.4
	<i>p value</i>	<i>0.45</i>	<i>0.000581</i>
Mother's Age			
Under 35	173 (76.2%)	105.4 ± 14.7	106.3±13.8
35+	54 (23.8%)	105.3 ± 15.9	109.2±17.3
	<i>p value</i>	<i>0.97</i>	<i>0.2637</i>
Smoking while pregnant			
No	213 (93.8%)	105.2 ± 14.9	107.0±14.8
Yes	14 (6.2%)	108.6 ± 15.2	106.4±13.0
	<i>p value</i>	<i>0.42</i>	<i>0.8753</i>
Season of Conception			
Warm	117 (51.5%)	104.7 ± 15.2	107.4±15.0
Cool	110 (48.5%)	106.2 ± 14.7	106.5±14.4
	<i>p value</i>	<i>0.47</i>	<i>0.619</i>
Home Owner			
No	46 (20.3%)	105.0 ± 14.8	102.1±15.7
Yes	181 (79.7%)	105.5 ± 15	108.2±14.2
	<i>p value</i>	<i>0.85</i>	<i>0.0122</i>

Supplemental Table 6: Adjusted^a Association of Air Pollutant Exposure During Entire Pregnancy and Year 1 of Life with VABS, MSEL, and CSS S

Time	Score	Air Pollutant Exposure ^b (N=22)								
		NO ₂	95% CI		O ₃	95% CI		PM ₁₀	95% CI	
Prenatal	<i>VABS Composite Score</i>	0.60%	-4.59%	6.07%	1.42%	-2.68%	5.69%	2.43%	-3.66%	8
	<i>VABS Communication Subscale</i>	-0.13%	-4.71%	4.67%	0.80%	-2.82%	4.55%	1.44%	-3.93%	7
	<i>VABS Daily Living Subscale</i>	-1.54%	-6.51%	3.69%	2.43%	-1.62%	6.63%	2.13%	-3.82%	8
	<i>VABS Socialization Subscale</i>	-0.98%	-5.26%	3.49%	1.07%	-2.35%	4.61%	-0.07%	-5.06%	5
	<i>VABS Motor Skills Subscale</i>	4.42	-0.89	9.72	0.48	-3.68	4.64	3.82	-2.18	1
	<i>MSEL Composite DQ</i>	3.22	-1.95	8.38	0.76	-3.28	4.80	2.35	-3.55	
	<i>MSEL Verbal DQ</i>	2.76	-3.44	8.97	0.37	-4.48	5.22	1.96	-5.15	
	<i>MSEL Non Verbal DQ</i>	3.67	-1.51	8.85	1.15	-2.91	5.20	2.74	-3.16	
Year 1	<i>VABS composite score</i>	4.63%	-1.46%	11.09%	4.40%	-0.89%	9.97%	4.21%	-3.36%	11
	<i>VABS Communication Subscale</i>	2.89%	-2.45%	8.52%	3.43%	-1.24%	8.32%	5.08%	-1.71%	11
	<i>VABS Daily Living Subscale</i>	2.31%	-3.54%	8.51%	6.06%	0.83%	11.56%	0.06%	-7.08%	7
	<i>VABS Socialization Subscale</i>	-0.77%	-5.64%	4.34%	3.00%	-1.38%	7.58%	1.72%	-4.50%	8
	<i>VABS Motor Skills Subscale</i>	8.61	2.65	14.57	1.30	-3.97	6.57	5.82	-1.50	1
	<i>MSEL Composite DQ</i>	5.39	-0.47	11.24	2.99	-2.12	8.10	4.68	-2.49	1
	<i>MSEL Verbal DQ</i>	3.95	-3.11	11.00	3.87	-2.25	10.00	3.50	-5.22	1
	<i>MSEL Non Verbal DQ</i>	6.83	0.98	12.68	2.11	-3.02	7.25	5.86	-1.27	1

^aAll models were adjusted for sex, max education in the home, referral center, race, mother's age, prenatal smoking, season of conception and home

^bPollutant effects were scaled to 2 SD of the distribution of the pregnancy average exposure: 6.82 ppb for NO₂, 11.1 ppb for O₃, 11.6 µg/m³ for PM₁₀

* p<0.05