Table 1.1: Previous Literature of perinatal PCB exposure and cognitive development.

Study Population	First Author	Year	Age	Breastfed	N	Exposure Measure	PCB Categories	Median PCB-153 (ng/g Lipid)[1]	Outcome	Result	
										<3 ng/ML	≥3 ng/ML
									Birthweight (kg)	3.6±0.54	3.4±0.54
						Prenatal PCB			Head circumference (cm)	35.3±1.2	34.6±1.2
						Fish consumption			Gestational age (wk)	41.0±3.0	39.8±3.1
						Umbilical cord serum	<3 ng/ML		Neuromuscular maturity	20.0±2.4	19.0±2.4
Michigan	Fein, G.	1984	Newborn		242	Maternal serum	≥3 ng/ML	120	Physical maturity	17.0±2.1	16.9±2.2
						Prenatal PCB					
						Fish consumption				Fish consumption	β=-0.23, p<0.05
						Umbilical cord serum				Cord serum	β=-0.39, p<0.01
	Jacobson, S.	1985	7 months		123	Breast milk (postnatal)	Continuous	120	Fagan's test of visual recognition memory	Breast milk	F(3,80)=1.18
	Jacobson, J.	1990	4 years		236	Umbilical cord serum	Continuous	120	McCarthy Scales of Children's Abilities		
						(Prenatal)			Verbal	β=-0.18	p=0.05
									Perceptual Performance	β=-0.03	p=0.73
									Quantitative	β=-0.17	p=0.07
									Memory	β=-0.22	p=0.02
									Motor	β=0.03	p=0.74
									General Cognitive Index	β=0.08	p=0.22
									Verbal Memory	β=-0.22	p=0.02
									Numerical Memory	β=-0.24	p=0.01
						Time breastfed*Breast milk					
						(postnatal)	Continuous		Quantitative	β=-0.20	p=0.07
									Memory	β=-0.27	p=0.01
									Verbal Memory	β=-0.22	p=0.05
									Numerical Memory	β=-0.21	p=0.05
						Child serum (postnatal)	Continuous		No significant association (data not shown)		
	Jacobson, J.	2002	4 Years	Overall	181	Umbilical cord serum	Continuous	120	McCarthy Scales of Children's Abilities		
						(Prenatal)			Verbal	β=-0.12	p<0.05
									Perceptual Performance	β=-0.01	Not significant
									Quantitative	β=-0.20	p<0.01
									Memory	β=-0.18	p<0.05
									Motor	β=0.07	Not significant
									General Cognitive Index	β=-0.13	p<0.05

Table 1.1, Continued

Study Population	First Author	Year	Age	Breastfed	N	Exposure Measure	PCB Categories	Median PCB-153 (ng/g Lipid)[1]	Outcome		Result
		2002	4 Years	< 6 weeks	56	Umbilical cord serum (Prenatal)	Continuous	120	McCarthy Scales of Children's Abilities		
									Verbal	β=-0.45	p<0.01
									Perceptual Performance	β=0.04	Not significant
									Quantitative	β=-0.36	p<0.05
									Memory	β=-0.45	p<0.01
									Motor	β=0.14	Not significant
									General Cognitive Index	β=-0.29	p<0.05
				≥ 6 weeks	122						
									Verbal	β=0.09	Not significant
									Perceptual Performance	β=0.06	Not significant
									Quantitative	β=0.03	Not significant
									Memory	β=0.03	Not significant
									Motor	β=0.10	Not significant
									General Cognitive Index	β=0.09	Not significant
		2002	11 Years	Overall	178	Umbilical cord serum (Prenatal)	Continuous	120	Wechsler IQ scale		
									Full-scale IQ	β=-0.17	p<0.05
									Verbal comprehension	β=-0.16	p<0.05
									Freedom from distractibility	β=-0.17	p<0.05
									Woodcock Reading Mastery		
									Word comprehension	β=-0.17	Not significant
									Wide Range Achievement		
									Arithmetic	β=-0.04	Not significant
		2002	11 Years	< 6 weeks	56			120	Wechsler IQ scale		
									Full-scale IQ	β=-0.32	p<0.01
									Verbal comprehension	β=-0.38	p<0.001
									Freedom from distractibility	β=-0.36	p<0.05
									Woodcock Reading Mastery		
									Word comprehension	β=-0.36	p<0.01
									Wide Range Achievement		
									Arithmetic	β=-0.25	p<0.05

Table 1.1, Continued

Study Population	First Author	Year	Age	Breastfed	N	Exposure Measure	PCB Categories	Median PCB-153 (ng/g Lipid)[1]	Outcome	Result	
				≥ 6 weeks	122			120	Full-scale IQ	β=-0.06	Not significant
									Verbal comprehension	β=-0.00	Not significant
									Freedom from distractibility	β=-0.08	Not significant
									Woodcock Reading Mastery		
									Word comprehension	β=-0.02	Not significant
									Wide Range Achievement		
									Arithmetic	β=0.08	Not significant
North Carolina	Gladen	1988	6 Months		706	Breastmilk (prenatal)	Continuous	100	Bayley MDI	β=0.12	p=0.78, SE=0.44
									Bayley PDI	β=-0.96	p=0.04, SE=0.46
						Time breastfed*Breastmilk (postnatal)	Continuous	100	Bayley MDI	β=-0.18	p=0.36, SE=0.20
									Bayley PDI	β=-0.27	p=0.17, SE=0.20
			12 Months		706	Breastmilk (prenatal)	Continuous	120	Bayley MDI	β=-0.54	p=0.32, SE=0.54
									Bayley PDI	β=-1.34	p=0.03, SE=0.61
						Time breastfed*Breastmilk (postnatal)	Continuous	120	Bayley MDI	β=-0.06	p=0.70, SE=0.16
									Bayley PDI	β=-0.27	p=0.13, SE=0.18
Oswego	Darvill	2000	6 Months		230	Umbilical cord serum (prenatal)	Not dectable	40	Fagan test of infant development	F(2, 214)=4.87	p=0.014
							>0.18 ng/g		Linear trend analysis		
							>0.52 ng/g				
							>1.10 ng/g				
						Breastmilk (postnatal)	Continuous	40	Fagan test of infant development	β=0.065	p=0.707
			12 Months		219	Umbilical cord serum (prenatal)	Not dectable	40	Fagan test of infant development	F(2, 207)=2.04	p=0.75
							>0.18 ng/g		Linear trend analysis		
							>0.52 ng/g				
							>1.10 ng/g				
						Breastmilk (postnatal)	Continuous	40	Fagan test of infant development	β=-0.075	p=0.304

Table 1.1, Continued

Study Population	First Author	Year	Age	Breastfed	N	Exposure Measure	PCB Categories	Median PCB-153 (ng/g Lipid)[1]	Outcome		Result
Faroe Islands	Grandjean	2001	7 Years		435	Umbilical cord serum (prenatal)	Continuous	400	Finger tapping (preferred hand)	β=-0.76	p=0.30
									Hand-eye coordination (errors)	β=-0.036	p=0.26
									NES2 Continuous Performance Test		
									Missed responses	β=0.03	p=0.74
									Reaction time	β=7.2	p=0.41
									Wechsler Intelligence Scale for Children		
									Digit spans	β=0.07	p=0.68
									Similarities	β=0.62	p=0.18
									Block designs	β=0.09	p=0.52
									Bender Visual Motor Gestalt Test		
									Errors on copying	β=0.25	p=0.71
									Reproduction	β=0.05	p=0.79
									Boston naming test		
									No cues	β=-0.50	p=0.41
									With cues	β=-0.74	p=0.22
									California Verbal Learning Test (Children)		
									Learning	β=1.38	p=0.18
									Short-term reproduction	β=0.22	p=0.50
									Long-term reproduction	β=-0.13	p=0.73
									Recognition	β=-0.07	p=0.77
Dutch	Patandin	1999	42 Months	Breastfed	195	Maternal Plasma	Continuous	100	Overall Cognitive Scale	β=-2.20	SE=2.14
					195		(lipid adjusted)		Sequential Processing Scale	β=-1.49	SE=2.46
					198				Simultaneous Processing Ability	β=-2.45	SE=2.18
					100				Verbal Comprehension Scale	β=-0.20	SE=2.74
				Formula fed	178	Maternal Plasma	Continuous	100	Overall Cognitive Scale	β=-8.69	SE=2.49
					178				Sequential Processing Scale	β=-8.34	SE=2.68
					186				Simultaneous Processing Ability	β=-6.54	SE=2.39
					90				Verbal Comprehension Scale	β=-6.13	SE=2.79

Table 1.1, Continued

Study Population	First Author	Year	Age	Breastfed	N	Exposure Measure	PCB Categories	Median PCB-153 (ng/g Lipid)[1]	Outcome	Result	
	Vreugdenhil	2002	6.5 Years		418	Maternal Plasma	Continuous	100	General Cognitive Index	β=-26.06	SE=10.37
									Interaction term: PCB*Parental IQ	β=0.22	SE=0.09
									General Cognitive Index	β=-26.92	SE=22.79
									Interaction term: PCB*HOME score	β=0.60	SE=0.48
									Memory	β=-16.49	SE=6.72
									Interaction term: PCB*Parental IQ	β=0.13	SE=0.06
									Memory	β=-12.99	SE=14.75
									Interaction term: PCB*HOME score	β=0.26	SE=0.31
									Motor	β=-21.24	SE=9.58
									Interaction term: PCB*Parental IQ	β=0.16	SE=0.08
									Motor	β=-46.65	SE=20.92
									Interaction term: PCB*HOME score	β=0.92	SE=0.44
German	Walkowiak	2001	7 Months		110	Breast Milk (prenatal)	Continuous	140	Bayley MDI	β=-3.61	p=0.10
									Bayley PDI	β=03.13	p=0.12
			18 Months		112				Bayley MDI	β=-4.11	p=0.06
									Bayley PDI	β=-4.78	p=0.045
			42 Months		87	Breast Milk (prenatal)			Kaufman Achievement Battery	β=-4.30	p=0.0006
						4 -Month child's serum (postnatal)			Kaufman Achievement Battery	t=2.01	p=0.025
Slovak	Park	2010	16-months		760	Maternal Serum	Continuous, Major PCBs	170	Bayley MDI	β=-0.39	SE=0.62
									Bayley PDI	β=-0.59	SE=0.73
							Continuous, Dioxin-like PCBs		Bayley MDI	β=-1.60	SE=0.45
									Bayley PDI	β=-1.26	SE=0.53
							Continuous, Anti-estrogenic PCBs		Bayley MDI	β=-0.47	SE=0.61
									Bayley PDI	β=-0.58	SE=0.72

[1] Estimated by Longnecker er al., 2003; Slovak PCB 153 levels estimated from current study

TABLES

Table 2.1. Median (P25, P75) population characteristics of a cohort of mother-child pairs from Michalovce, Slovakia by maternal serum polychlorinated biphenyl (PCB) congener 153 (ng/ml), child 16-month serum PCB congener 153 (ng/ml), and child 45-month serum PCB congener 153 (ng/ml).

Characteristic	N[1] (n=438)	%	Maternal PCB 153 (ng/ml) Median (P25, P75)	N[1] (n=396)	%	16-month PCB 153 (ng/ml) Median (P25, P75)	45-month PCB 153 (ng/ml) Median (P25, P75)
Maternal age at delivery							
20 or younger	30	6.9	1.0 (0.8, 2.0)	28	7.1	0.6 (0.2, 1.4)	0.7 (0.3, 1.5)
21 -29	310	70.8	1.6 (1.2,2.7)	278	70.2	0.7 (0.2, 1.6)	0.6 (0.2, 1.3)
30 or older	98	22.4	2.4 (1.7, 4.0)	90	22.7	1.3 (0.6, 2.4)	1.0 (0.4, 1.8)
Romani ethnicity							
Slovak or other Eastern European	364	83.1	1.8 (1.2, 2.9)	332	83.8	0.7 (0.2, 1.8)	0.7 (0.3, 1.5)
Romani	74	16.9	1.3 (0.9, 2.0)	64	16.2	1.1 (0.5, 2.1)	0.9 (0.5, 1.6)
Maternal education							
Basic Schooling	92	21.4	1.4 (0.8, 2.1)	80	20.6	0.9 (0.2, 1.7)	0.8 (0.4, 1.5)
Some High School	108	25.1	2.0 (1.2, 3.0)	97	25.0	0.6 (0.2, 1.5)	0.6 (0.2, 1.1)
High School Graduate	206	47.9	1.8 (1.3, 2.8)	191	49.2	0.8 (0.3, 1.9)	0.7 (0.3, 1.7)
College or Higher	24	5.6	2.0 (1.3, 2.8)	20	5.2	1.6 (0.7, 2.4)	1.0 (0.6, 1.9)
Missing	8			8			
Maternal smoking during pregnancy							
Yes	70	16.5	1.7 (1.2, 2.7)	63	16.4	0.6 (0.2, 1.6)	0.6 (0.2, 1.5)
No	354	83.5	1.9 (1.1, 3.0)	322	83.6	0.8 (0.3, 1.9)	0.7 (0.3, 1.5)
Missing	14			11			
Maternal alcohol consumption during pregnancy							
Yes	56	13.5	1.8 (1.1, 2.7)	49	13.0	0.7 (0.3, 1.4)	0.5 (0.3, 1.0)
No	360	86.5	1.7 (1.2, 2.8)	327	87.0	0.8 (0.3, 1.9)	0.7 (0.3, 1.6)
Missing	22			20			
Birth Weight							
Less than 2500 g	20	4.6	1.5 (1.1, 2.5)	18	4.6	0.4 (0.2, 1.2)	0.6 (0.2, 1.0)
2500-3499 g	238	54.6	1.7 (1.2, 2.7)	214	54.3	0.8 (0.3, 1.9)	0.7 (0.3, 1.5)
Greater than or equal to 3500 g	178	40.8	1.7 (1.2, 3.0)	162	41.1	0.8 (0.3, 1.9)	0.7 (0.3, 1.6)
Missing	2			2			

Table 2.1, Continued

Characteristic	N[1] (n=438)	%	Maternal PCB 153 (ng/ml) Median (P25, P75)	N[1] (n=396)	%	16-month PCB 153 (ng/ml) Median (P25, P75)	45-month PCB 153 (ng/ml) Median (P25, P75)
Breastfeeding							
Less than 6 months	209	52.0	1.8 (1.2, 2.8)	201	51.9	0.3 (0.2, 0.6)	0.3 (0.2, 0.6)
At least 6 months	193	48.0	1.7 (1.1, 2.7)	186	48.1	1.7 (1.0, 2.8)	1.4 (0.8, 2.3)
Missing	36			9			
Marital status							
Married, living with partner	401	94.4	1.7 (1.2, 2.8)	364	94.6	0.8 (0.3, 1.9)	0.7 (0.3, 1.5)
Not married or living with partner	24	5.7	1.5 (1.1, 2.3)	21	5.5	0.5 (0.2, 1.4)	0.5 (0.2, 0.9)
Missing	13			11			
Child's gender							
Male	213	48.6	1.7 (1.1, 2.7)	194	49.0	0.7 (0.2, 1.8)	0.7 (0.3, 1.7)
Female	225	51.4	1.7 (1.2, 2.9)	202	51.0	0.9 (0.3, 1.9)	0.7 (0.3, 1.4)
Parity							
0	169	38.6	1.7 (1.2, 2.7)	151	38.1	0.6 (0.2, 1.9)	0.6 (0.2, 1.3)
1	159	36.3	1.8 (1.2, 2.9)	143	36.1	0.9 (0.4, 1.8)	0.7 (0.4, 1.7)
≥ 2	110	25.1	1.8 (1.2, 3.1)	102	25.8	0.8 (0.3, 1.9)	0.7 (03, 1.5)
Maternal raven score							
Beta	437		β = 0.006	395		β = -0.016	β = -0.008
Missing	1			1			
HOME score							
Beta	399		β = 0.021	384		β = 0.005	β = 0.019
Missing	39			12			

[1] Maternal PCB 153 sample consists of all 438 mother/child pairs participating in the cognitive assessment at 45 months; the 16- and 45-month PCB samples consist only of those mother/child pairs with both 16- and 45-month child serum levels.

Table 2.2. Population characteristics of a cohort of mother-child pairs from Michalovce, Slovakia and median (P25, P75) values by children's CBCL[1] Externalizing Scores, CBCL Internalizing Scores, and WPPSI-III[1] Block Design scores at 45 months of age.

Characteristic	N (n=438)	%	CBCL Externalizing Score Median (P25, P75)	CBCL Internalizing Score Median (P25, P75)	WPPSI Block Design Score Median (P25, P75)
Maternal age at delivery					
20 or younger	30	6.9	5.0 (1, 12)	4.5 (2, 9)	8.0 (6, 10)
21 -29	310	70.8	8.0 (4, 14)	8.0 (4, 13)	12.0 (8, 14)
30 or older	98	22.4	7.0 (4, 14)	8.5 (5, 14)	12.0 (10, 14)
Romani ethnicity					
Slovak or other Eastern European	364	83.1	9.0 (5, 14)	9.0 (5, 14)	12.0 (10, 16)
Romani	74	16.9	3.0 (1, 6)	2.0 (1,8)	8.0 (4, 10)
Maternal education					
Basic Schooling	92	21.4	3.5 (1, 7)	3.0 (1, 8)	8.0 (4, 10)
Some High School	108	25.1	9.0 (4, 14.5)	10.0 (5, 15)	10.0 (10, 14)
High School Graduate	206	47.9	9.0 (5, 14)	9.0 (5, 13)	12.0 (12, 16)
College or Higher	24	5.6	8.0 (6, 15.5)	8.0 (5.5, 17)	15.0 (11, 18)
Missing	8				
Maternal smoking during pregnancy					
Yes	70	16.5	4.0 (1, 11)	5.5 (2, 11)	9.0 (6, 10)
No	354	83.5	8.0 (4, 14)	9.0 (5, 13)	12.0 (10, 14)
Missing	14				
Maternal alcohol consumption during pregnancy					
Yes	56	13.5	10.0 (3.5, 16.5)	9.5 (5.5, 15)	12.0 (9, 16)
No	360	86.5	7.0 (4, 13)	8.0 (4, 12.5)	10.0 (8, 14)
Missing	22				
Birth Weight					
Less than 2500 g	20	4.6	6.0 (1, 12)	4.5 (2, 13.5)	8.0 (6, 13)
2500-3499 g	238	54.6	7.0 (3, 13)	8.0 (4, 12)	10.0 (8, 14)
Greater than or equal to 3500 g	178	40.8	9.0 (5, 14)	9.0 (5, 13)	12.0 (10, 16)
Missing	2				

Characteristic	N (n=438)	%	CBCL Externalizing Score Median (P25, P75)	CBCL Internalizing Score Median (P25, P75)	WPPSI Block Design Score Median (P25, P75)
Breastfeeding					
Less than 6 months	209	52.0	8.0 (4, 14)	9.0 (5, 14)	10.0 (8, 14)
At least 6 months	193	48.0	7.0 (3, 13)	7.0 (3, 12)	12.0 (8, 14)
Missing	36				
Marital Status					
Married, living with partner	401	94.4	8.0 (4, 14)	8.0 (4, 13)	12.0 (8, 14)
Not married or living with partner	24	5.7	5.0 (3, 14.5)	7.5 (4, 13)	10.0 (5, 13)
Missing	13				
Child's gender					
Male	213	48.6	8.0 (4, 14)	8.0 (3, 12)	10.0 (8, 14)
Female	225	51.4	7.0 (3, 13)	9.0 (5, 14)	12.0 (10, 14)
Parity					
0	169	38.6	9.0 (5, 14)	9.0 (5, 14)	12.0 (10, 16)
1	159	36.3	8.0 (4, 14)	8.0 (4, 13)	10.0 (8, 14)
≥ 2	110	25.1	5.0 (2, 11)	5.5 (2, 11)	10.0 (8, 14)
Maternal raven score					
Beta	437		$\beta = 0.144$	$\beta = 0.146$	$\beta = 0.155$
Missing	1				
HOME score					
Beta	399		$\beta = 0.291$	$\beta = 0.238$	$\beta = 0.392$
Missing	39				

[1] Child Behavior Checklist and Wechsler Preschool and Primary Scale of Intelligence-III. Each test was completed when the child was approximately 45 months of age.

Table 2.3. Distribution of total maternal polychlorinated biphenyls (PCBs)[1], maternal, 16-month, and 45-month PCB 153, and maternal, 16-month, and 45-month PCB 118 for a cohort of highly exposed mother-child pairs in Michalovce, Slovakia. Lipid adjusted wet weights are provided for comparison.

		Wet weight PCBs (ng/ml)						Lipid adjusted (ng/g lipid)					
PCB[2]	N[3]	Mean	Min	P25	P50	P75	Max	Mean	Min	P25	P50	P75	Max
Total maternal PCB	438	7.437	1.330	3.643	5.386	8.899	49.977	710.930	138.596	372.182	546.269	798.303	4511.561
Maternal PCB 153	396	2.365	0.434	1.175	1.727	2.787	14.270	224.558	46.451	120.756	173.639	257.109	1273.330
Maternal PCB 118	395	0.174	0.006	0.060	0.121	0.213	1.946	16.197	0.604	6.256	11.258	19.770	177.267
16 month PCB 153	396	1.512	0.002	0.251	0.784	1.841	16.212	264.113	0.453	42.247	139.076	335.013	3503.608
16 month PCB 118	395	0.126	0.001	0.012	0.052	0.127	3.275	22.027	0.162	2.154	9.387	22.646	632.605
45 month PCB 153	396	1.258	0.016	0.272	0.675	1.504	21.440	217.424	3.202	49.448	120.318	268.808	2749.419
45 month PCB 118	395	0.087	0.001	0.016	0.037	0.095	1.757	15.147	0.179	2.903	6.521	15.640	292.675

[1] Total maternal PCB was calculated as the sum of PCB congeners 118, 138^{+163}, 153, 156^{+171}, 170, and 180.

[2] Values represent PCB concentrations following imputation of PCBs below the limit of detection.

[3] Total maternal PCB included all women who had PCB levels measured at birth and who completed the 45-month evaluation; Maternal PCB 153 and 118 were limited to include only those women whose children were evaluation at 16- and 45-months.

Table 2.4. Adjusted negative binomial regression parameter estimates for the association between maternal, child 16-month, and child 45-month PCBs 153 and 118 with 45-month CBCL syndrome scales in a cohort of Slovak children highly exposed to PCBs.

	Maternal PCB 153[1]				16-Month PCB 153[2]				45-Month PCB 153[2]			
Subtest[3]	β	exp(β)	95% CI exp(β)		β	exp(β)	95% CI exp(β)		β	exp(β)	95% CI exp(β)	
Attention Problems	-0.003	0.997	0.957	1.039	0.000	1.000	0.960	1.042	0.008	1.008	0.963	1.055
Aggressive Behavior	-0.001	0.999	0.957	1.043	-0.004	0.996	0.956	1.037	0.012	1.012	0.963	1.063
Sleep Problems	-0.010	0.990	0.936	1.048	0.025	1.025	0.973	1.080	0.021	1.022	0.961	1.086
Emotionally Reactive	-0.019	0.981	0.926	1.040	-0.001	0.999	0.943	1.058	0.008	1.008	0.941	1.080
Anxious Depressed	0.007	1.007	0.966	1.049	0.040	1.041	1.002	1.082	0.021	1.022	0.975	1.071
Somatic Complaints	-0.028	0.972	0.930	1.017	-0.014	0.986	0.942	1.033	-0.018	0.982	0.931	1.036
Withdrawn	-0.031	0.969	0.922	1.019	0.004	1.004	0.957	1.052	-0.005	0.995	0.941	1.052
Externalizing	-0.002	0.998	0.958	1.039	-0.004	0.996	0.959	1.035	0.011	1.011	0.964	1.061
Internalizing	-0.013	0.987	0.950	1.025	0.015	1.015	0.979	1.053	0.006	1.006	0.961	1.053
	Maternal PCB-118[1]				16-Month PCB 118[2]				45-Month PCB 118[2]			
Attention Problems	0.028	1.028	0.675	1.566	0.135	1.144	0.846	1.547	0.272	1.313	0.766	2.252
Aggressive Behavior	0.003	1.003	0.648	1.552	0.085	1.088	0.805	1.472	0.284	1.329	0.760	2.324
Sleep Problems	-0.180	0.835	0.452	1.541	0.226	1.253	0.847	1.853	0.203	1.226	0.587	2.558
Emotionally Reactive	-0.136	0.873	0.478	1.594	0.236	1.267	0.846	1.895	0.498	1.646	0.806	3.361
Anxious Depressed	0.040	1.041	0.684	1.585	0.349	1.418	1.073	1.875	0.365	1.440	0.856	2.423
Somatic Complaints	-0.395	0.674	0.411	1.104	0.046	1.047	0.747	1.469	0.001	1.001	0.537	1.867
Withdrawn	-0.406	0.666	0.390	1.137	0.018	1.018	0.703	1.474	-0.010	0.990	0.508	1.928
Externalizing	0.009	1.009	0.668	1.523	0.095	1.099	0.827	1.462	0.270	1.311	0.772	2.224
Internalizing	-0.147	0.863	0.585	1.275	0.205	1.228	0.933	1.616	0.254	1.289	0.791	2.103

[1] Attention problems, Aggressive Behavior, Sleep problems, and Externalizing scores adjusted for total maternal serum lipids, maternal Raven score, HOME score, parity, child's sex, and Romani ethnicity. Emotionally reactive, Anxious/Depressed, Somatic complaints, Withdrawn, and Internalizing scores adjusted for total maternal serum lipids, maternal Raven score, HOME score, child's sex, and Romani ethnicity.

[2] Attention problems, Aggressive Behavior, Sleep problems, and Externalizing scores adjusted for total 16- or 45-month serum lipids, breastfed for less than 6 months, maternal Raven score, HOME score, child's sex, parity, and Romani ethnicity. Emotionally reactive, Anxious/Depressed, Somatic complaints, Withdrawn, and Internalizing scores adjusted for total 16- or 45-month serum lipids, breastfed for less than 6 months, maternal Raven score, HOME score, child's sex, and Romani ethnicity.

[3] After adjustment, sample sizes for maternal PCB 153 and 118 were 383 and 382 children, respectively; sample size for 16- and 45-month PCB 153 was 374 children and samples size for 16- and 45-month PCB 118 was 373 children.

Table 2.5. Adjusted multiple linear regression parameter estimates for the association between maternal, child 16-month, and child 45-month PCBs 153 and 118 with WPPSI-III subtests at 45 months in a cohort of Slovak children highly exposed to PCBs.

	Maternal PCB 153[1]			16-Month PCB 153[2]			45-Month PCB 153[2]		
Subtest	N	β	95% CI	N	β	95% CI	β	95% CI	
Block Design	383	-0.08	-0.27 0.12	374	-0.10	-0.28 0.08	-0.02	-0.24	0.19
Information Processing	383	-0.02	-0.23 0.18	374	0.07	-0.12 0.26	0.10	-0.13	0.33
Object Assembly	383	0.02	-0.26 0.30	374	0.03	-0.24 0.29	-0.03	-0.34	0.29
Picture Naming	382	0.09	-0.13 0.32	373	0.21	0.00 0.42	0.23	-0.02	0.48
Receptive Vocabulary	382	0.09	-0.18 0.36	373	0.08	-0.18 0.34	0.04	-0.27	0.34
	Maternal PCB 118[1]			16-Month PCB 118[2]			45-Month PCB 118[2]		
Block Design	382	-0.84	-2.74 1.07	373	-0.69	-2.06 0.69	-0.65	-3.14	1.83
Information Processing	382	-0.03	-2.03 1.96	373	0.43	-1.03 1.88	0.55	-2.10	3.20
Object Assembly	382	1.31	-1.39 4.02	373	0.17	-1.83 2.17	-0.23	-3.85	3.40
Picture Naming	381	0.64	-1.56 2.84	372	1.25	-0.36 2.86	1.57	-1.36	4.50
Receptive Vocabulary	381	-0.24	-2.92 2.44	372	0.15	-1.81 2.12	-0.84	-4.41	2.73

[1] Adjusted for total maternal serum lipids, maternal age at delivery, maternal Raven score, HOME score, child's sex, and Romani ethnicity.

[2] Adjusted for total 16- or 45-month serum lipids, breastfed for less than 6 months, maternal Raven score, HOME score, child's sex, and Romani ethnicity.