

Supplementary material:

Table S1. The child and parental characteristics.

Variables	<i>N</i> or mean	% or SD
Gender of the child (<i>N</i> =402)		
Boys	195	48.5
Girls	207	51.5
Birth weight (g); mean, SD (<i>N</i> =381)	3356	475
Gestational age (weeks); mean; SD (<i>N</i> =402)	39.2	1.4
Breastfeeding (<i>N</i> =402)		
Yes	360	89.6
No	42	10.4
Nursery attendance at 12 months (<i>N</i> =368)		
Yes	24	6.5
No	344	93.5
Nursery attendance at 24 months (<i>N</i> =225)		
Yes	51	22.7
No	174	77.3
Age at Bayley test administration (months)		
At 1 year; mean, SD (<i>N</i> =367)	13.2	1.4
At 2 years; mean, SD (<i>N</i> =232)	25.1	2.8
Maternal age at delivery (years); mean, SD (<i>N</i> =402)	29.1	4.3
Paternal age at child birth (years); mean, SD (<i>N</i> =376)	31.1	5.5
Maternal education (<i>N</i> =401)		
Primary/vocational	8	2.0
Secondary	112	27.9
University	281	70.1
Paternal education (<i>N</i> =393)		
Primary/vocational	13	3.3
Secondary	206	52.4
University	174	44.3
Marital status (<i>N</i> =398)		
Married	307	77.1
Unmarried	91	22.9
Maternal employment (<i>N</i> =385)		
Employed	348	90.4
Unemployed + Never employed	37	9.6
Socio-economic status (<i>N</i> =395)		
High	88	22.3
Medium	272	68.9
Low	35	8.9
Maternal prepregnancy BMI (kg/m ²); mean, SD (<i>N</i> =394)	22.6	3.7
Type of delivery (<i>N</i> =353)		
Cesarean	129	36.5
Vaginal	224	63.5
Alcohol consumption during pregnancy (<i>N</i> =340)		
Yes	30	8.8
No	310	91.2
Maternal cotinine level during pregnancy; mean, SD 1 st trimester (<i>N</i> =337)	12.9	45.5

2 nd trimester (N=236)	13.9	42.9
3 rd trimester (N=300)	8.9	29.6
Maternal smoking during pregnancy (based on cotinine level in saliva in the 1 st trimester) (N=337)		
Yes (≥ 10 ng/mL)	39	11.6
No (<10 ng/mL)	298	88.4
ETS child exposure at 1 year of age (N=368)		
Yes	146	39.7
No	222	60.3
ETS child exposure at 2 years of age (N=232)		
Yes	86	37.1
No	146	62.9

Table S2. Impact of selected socio-demographic, lifestyle variables and 2nd trimester blood lead level on the child psychomotor development within the first two years of life (*N* subjects = 200, *N* observations = 300).

Variables	Cognitive			Language			Motor		
	β	95%CI	<i>p</i>	β	95%CI	<i>p</i>	β	95%CI	<i>p</i>
Examiner 1	-8.36	-12.04 ; -4.69	<0.01	-11.19	-15.35 ; -7.03	<0.01	-14.81	-18.45 ; -11.17	<0.01
Examiner 2	-6.72	-9.55 ; -3.89	<0.01	0.05	-3.08 ; 3.17	0.98	4.33	0.82 ; 7.84	0.02
Examiner 4	17.22	11.47 ; 22.98	<0.01	-9.26	-14.13 ; -4.39	<0.01	-5.14	-11.46 ; 1.17	0.11
Child age at examination (months)	1.23	-0.21 ; 2.67	0.09	-4.88	-6.28 ; -3.49	<0.01	2.14	0.67 ; 3.61	0.01
Child gender (male)	3.07	0.11 ; 6.03	0.04	6.30	3.36 ; 9.23	<0.01	-0.29	-3.44 ; 2.86	0.86
Blood lead level ($\mu\text{g/dL}$)	0.60	-1.33 ; 2.52	0.54	-0.47	-2.62 ; 1.67	0.66	-0.28	-2.94 ; 2.37	0.83
Interaction blood lead level ($\mu\text{g/dL}$) by child age at examination (months)	-1.46	-2.93 ; 0.01	0.05	-0.72	-2.35 ; 0.91	0.38	0.77	-0.85 ; 2.39	0.35
Interaction blood lead level ($\mu\text{g/dL}$) by child gender	-0.23	-3.10 ; 2.64	0.87	-0.63	-3.48 ; 2.22	0.66	-0.58	-3.93 ; 2.76	0.73
Maternal age at delivery (years)	0.11	-0.26 ; 0.48	0.55	0.19	-0.17 ; 0.54	0.30	-0.09	-0.46 ; 0.29	0.65
Maternal education (high school)	2.39	-1.88 ; 6.67	0.27	-2.93	-13.21 ; 7.34	0.57	-3.70	-11.11 ; 3.72	0.33
Maternal education (university degree or more)	-1.74	-4.85 ; 1.37	0.27	-3.24	-6.33 ; -0.16	0.04	-0.51	-3.76 ; 2.74	0.76
Cotinine level during pregnancy (ng/mL)	-0.58	-1.87 ; 0.70	0.37	0.39	-1.02 ; 1.79	0.59	-0.92	-2.42 ; 0.59	0.23

2nd trimester lead levels and cotinine level during pregnancy are log10 transformed and standardized; child age at examination is standardized.

Data are reported as β – beta coefficients, 95% CI – 95% confidence interval, *p*-values.

Table S3. Impact of selected socio-demographic, lifestyle variables and cord blood lead level on the child psychomotor development within the first two years of life (all subjects; N subjects = 238, N observations = 365).

Variables	Cognitive			Language			Motor		
	β	95% CI	p	β	95% CI	p	β	95% CI	p
Examiner 1	-9.09	-12.39 ; -5.79	<0.01	-12.94	-16.47 ; -9.42	<0.01	-15.18	-18.64 ; -11.73	<0.01
Examiner 2	-8.14	-11.00 ; -5.27	<0.01	-3.38	-6.46 ; -0.31	0.03	6.42	3.41 ; 9.43	0.00
Examiner 4	9.23	5.05 ; 13.40	<0.01	-16.11	-20.13 ; -12.08	<0.01	-10.72	-15.56 ; -5.89	<0.01
Child age at examination (months)	2.61	1.17 ; 4.05	<0.01	-2.99	-4.44 ; -1.54	<0.01	2.63	1.21 ; 4.04	<0.01
Child gender (male)	4.27	1.72 ; 6.82	<0.01	6.85	4.12 ; 9.59	<0.01	1.93	-0.90 ; 4.76	0.18
Cord blood lead level ($\mu\text{g/dL}$)	-1.83	-3.82 ; 0.15	0.07	-0.39	-2.63 ; 1.84	0.73	-0.80	-2.90 ; 1.30	0.46
Interaction cord blood lead level ($\mu\text{g/dL}$) by child age at examination (months)	-1.35	-2.73 ; 0.03	0.06	-0.20	-1.71 ; 1.31	0.79	-0.25	-1.53 ; 1.03	0.70
Interaction cord blood lead level ($\mu\text{g/dL}$) by child gender	2.09	-0.41 ; 4.59	0.10	0.17	-2.66 ; 3.01	0.91	1.41	-1.42 ; 4.23	0.33
Maternal age at delivery (years)	0.07	-0.26 ; 0.39	0.69	0.02	-0.36 ; 0.40	0.91	-0.24	-0.63 ; 0.14	0.21
Maternal education (high school)	0.93	-2.23 ; 4.10	0.56	-1.91	-10.22 ; 6.39	0.65	-8.68	-13.14 ; -4.22	<0.01
Maternal education (university degree or more)	-3.05	-5.96 ; -0.13	0.04	-4.06	-7.54 ; -0.57	0.02	-0.88	-4.36 ; 2.60	0.62
Cotinine level during pregnancy (ng/mL)	0.46	-0.72 ; 1.64	0.44	0.08	-1.27 ; 1.42	0.91	-0.35	-1.55 ; 0.86	0.57

Cord blood lead levels and cotinine level during pregnancy are log10 transformed and standardized; child age at examination is standardized.

Data are reported as β – beta coefficients, 95% CI – 95% confidence interval, p -values.

Table S4. Impact of selected socio-demographic, lifestyle variables and cord blood lead level on the child psychomotor development within the first two years of life (excluding subjects with cord blood lead level ≥ 4.0 $\mu\text{g/dL}$; N subjects = 235, N observations = 359).

Variables	Cognitive				Language				Motor			
	β	95	%CI	p	β	95	%CI	p	β	95	%CI	p
Examiner 1	-9.50	-12.79 ; -6.21	<0.01		-13.37	-16.84 ; -9.90	<0.01		-15.84	-19.13 ; -12.55	<0.01	
Examiner 2	-8.10	-11.02 ; -5.19	<0.01		-3.14	-6.23 ; -0.06	0.05		6.27	3.23 ; 9.31	<0.01	
Examiner 4	9.11	4.96 ; 13.26	<0.01		-16.22	-20.26 ; -12.19	<0.01		-10.93	-15.74 ; -6.12	<0.01	
Child age at examination (months)	2.54	1.10 ; 3.98	<0.01		-3.09	-4.55 ; -1.64	<0.01		2.55	1.13 ; 3.97	<0.01	
Child gender (male)	4.31	1.77 ; 6.86	<0.01		6.89	4.12 ; 9.66	<0.01		1.83	-1.01 ; 4.66	0.21	
Cord blood lead level ($\mu\text{g/dL}$)	-2.41	-4.38 ; -0.43	0.02		-0.68	-3.13 ; 1.76	0.58		-1.17	-3.44 ; 1.09	0.31	
Interaction cord blood lead level ($\mu\text{g/dL}$) by child age at examination (months)	-1.60	-3.45 ; 0.26	0.09		-0.59	-2.36 ; 1.18	0.51		-0.42	-1.76 ; 0.92	0.54	
Interaction cord blood lead level ($\mu\text{g/dL}$) by child gender	2.22	-0.48 ; 4.91	0.11		0.15	-2.96 ; 3.26	0.92		0.98	-2.23 ; 4.19	0.55	
Maternal age at delivery (years)	0.06	-0.27 ; 0.39	0.72		-0.01	-0.39 ; 0.37	0.97		-0.25	-0.64 ; 0.15	0.22	
Maternal education (high school)	0.76	-2.42 ; 3.93	0.64		-2.24	-10.71 ; 6.23	0.60		-8.84	-13.55 ; -4.13	<0.01	
Maternal education (university degree or more)	-3.46	-6.39 ; -0.54	0.02		-4.61	-8.16 ; -1.05	0.01		-1.12	-4.70 ; 2.47	0.54	
Cotinine level during pregnancy (ng/mL)	0.61	-0.57 ; 1.79	0.31		0.24	-1.13 ; 1.61	0.73		-0.20	-1.43 ; 1.02	0.74	

Cord blood lead levels and cotinine level during pregnancy are log10 transformed and standardized; child age at examination is standardized.

Data are reported as β – beta coefficients, 95% CI – 95% confidence interval, p -values

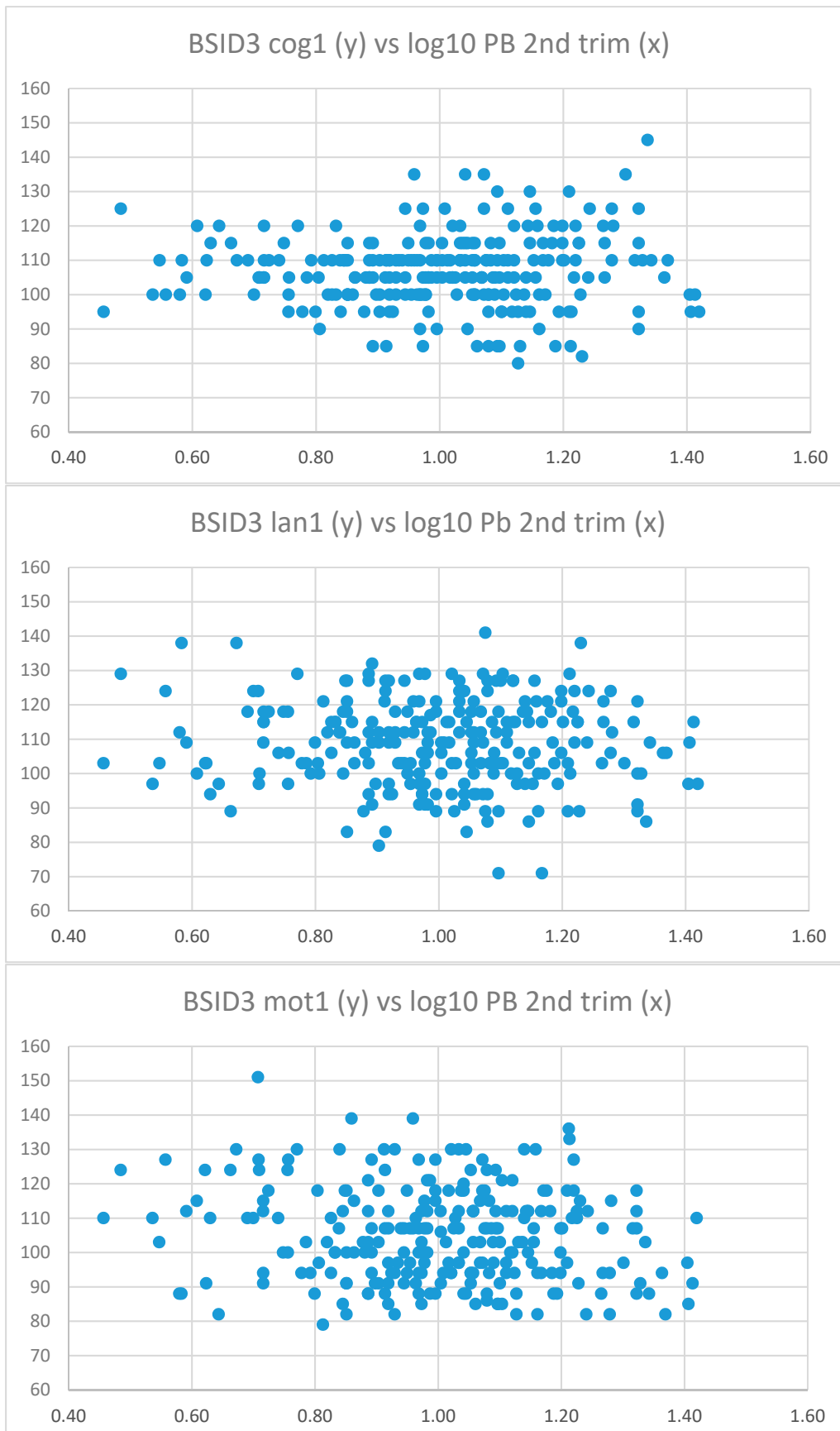
Table S5. Impact of selected socio-demographic, lifestyle variables and cord blood lead level on the child psychomotor development within the first two years of life (excluding subjects with cord blood lead level ≥ 3.0 $\mu\text{g/dL}$; N subjects = 233, N observations = 356).

Variables	Cognitive			Language			Motor		
	β	95%CI	p	β	95%CI	p	β	95%CI	p
Examiner 1	-9.55	-12.81 ; -6.28	<0.01	-13.36	-16.83 ; -9.89	<0.01	-15.83	-19.13 ; -12.53	<0.01
Examiner 2	-8.01	-10.95 ; -5.08	<0.01	-3.05	-6.14 ; 0.05	0.05	6.30	3.24 ; 9.37	<0.01
Examiner 4	9.12	4.93 ; 13.31	<0.01	-15.72	-19.68 ; -11.75	<0.01	-10.89	-15.76 ; -6.02	<0.01
Child age at examination (months)	2.38	0.96 ; 3.81	<0.01	-3.24	-4.69 ; -1.80	<0.01	2.53	1.10 ; 3.96	<0.01
Child gender (male)	4.28	1.74 ; 6.82	<0.01	6.98	4.21 ; 9.74	<0.01	1.82	-1.03 ; 4.67	0.21
Cord blood lead level ($\mu\text{g/dL}$)	-2.48	-4.46 ; -0.51	0.01	-0.74	-3.20 ; 1.73	0.56	-1.18	-3.45 ; 1.08	0.30
Interaction cord blood lead level ($\mu\text{g/dL}$) by child age at examination (months)	-2.37	-3.94 ; -0.80	<0.01	-1.31	-3.03 ; 0.41	0.13	-0.54	-2.05 ; 0.98	0.48
Interaction cord blood lead level ($\mu\text{g/dL}$) by child gender	2.08	-0.76 ; 4.93	0.15	0.40	-2.71 ; 3.51	0.80	0.93	-2.52 ; 4.39	0.59
Maternal age at delivery (years)	0.06	-0.28 ; 0.39	0.74	0.01	-0.38 ; 0.39	0.97	-0.25	-0.65 ; 0.15	0.22
Maternal education (high school)	0.74	-2.47 ; 3.95	0.65	-2.16	-10.67 ; 6.35	0.62	-8.86	-13.61 ; -4.10	<0.01
Maternal education (university degree or more)	-3.64	-6.60 ; -0.68	0.02	-4.96	-8.55 ; -1.38	0.01	-1.19	-4.82 ; 2.45	0.52
Cotinine level during pregnancy (ng/mL)	0.65	-0.53 ; 1.84	0.28	0.27	-1.12 ; 1.65	0.70	-0.19	-1.43 ; 1.05	0.76

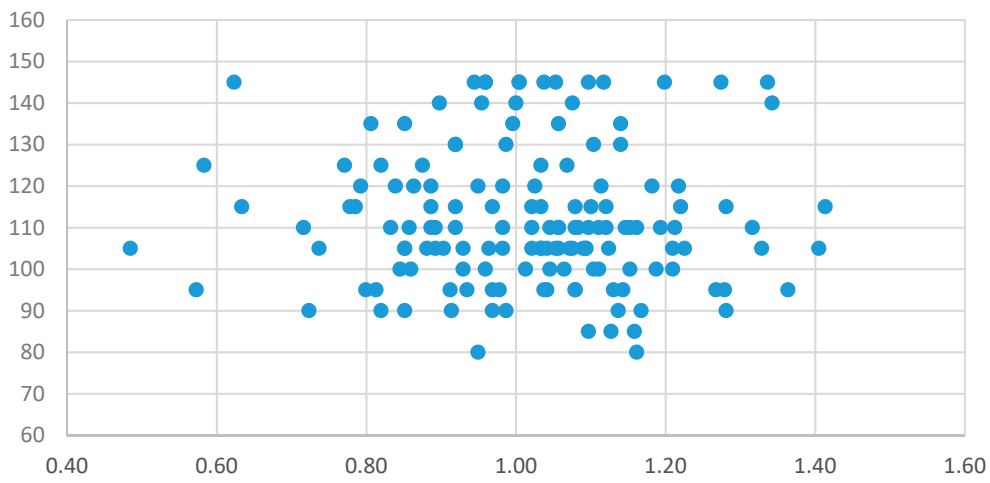
Cord blood lead levels and cotinine level during pregnancy are log₁₀ transformed and standardized; child age at examination is standardized.

Data are reported as β – beta coefficients, 95% CI – 95% confidence interval, p -values.

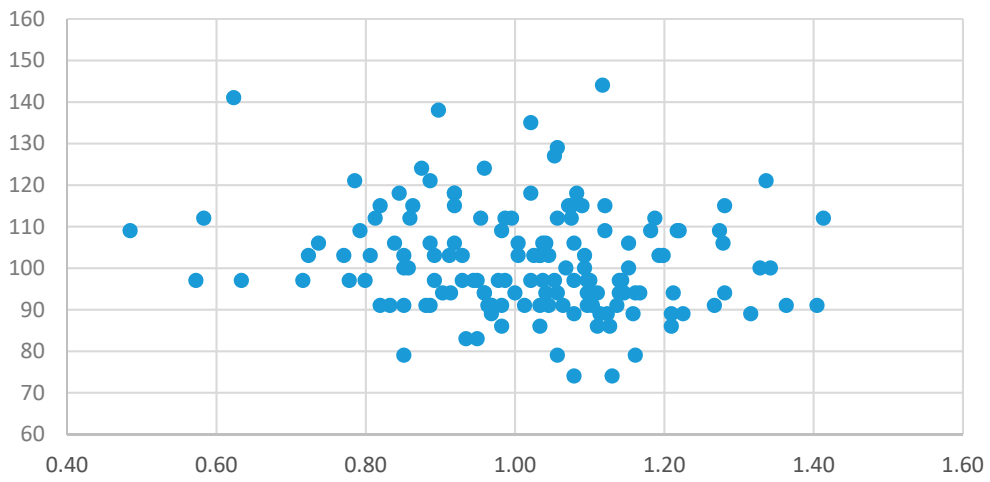
Figure S1. Scatterplots relating blood lead levels in the 2nd trimester of pregnancy and in the cord blood to the Bayley cognitive, language and motor scores at one and two years of age.



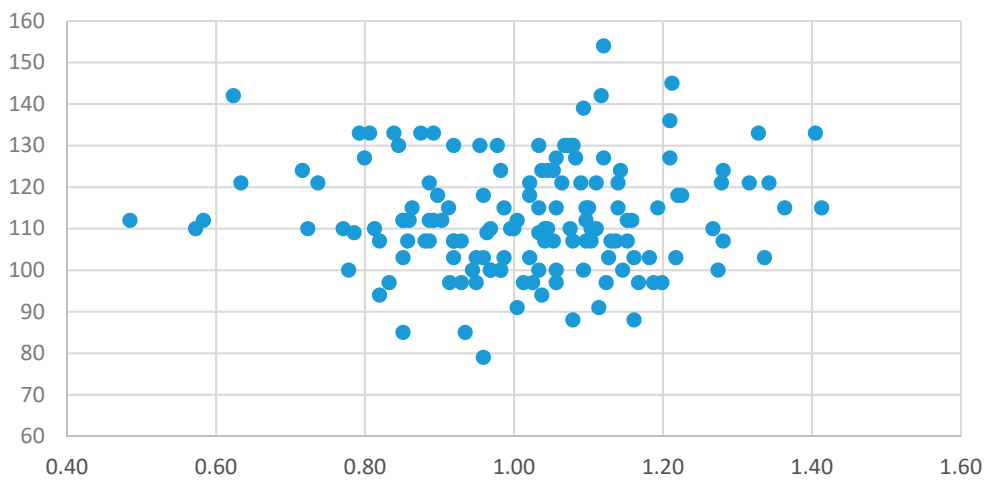
BSID3 cog2 (y) vs log10 PB 2nd trim (x)



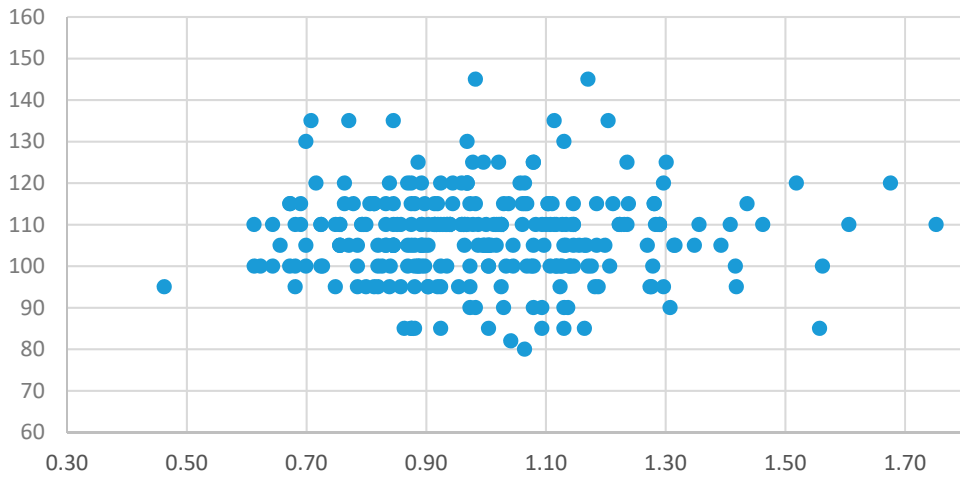
BSID3 lan2 (y) vs log10 PB 2nd trim (x)



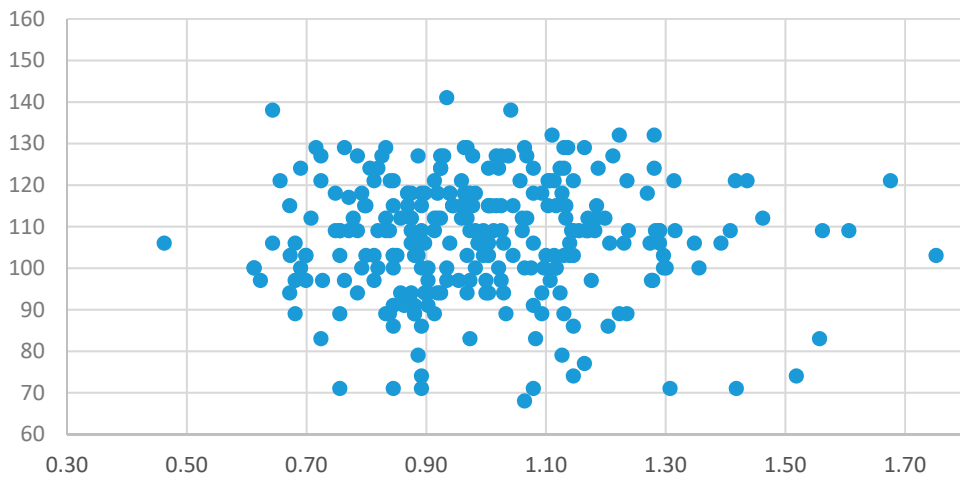
BSID3 mot2 (y) vs log10 PB 2nd trim (x)



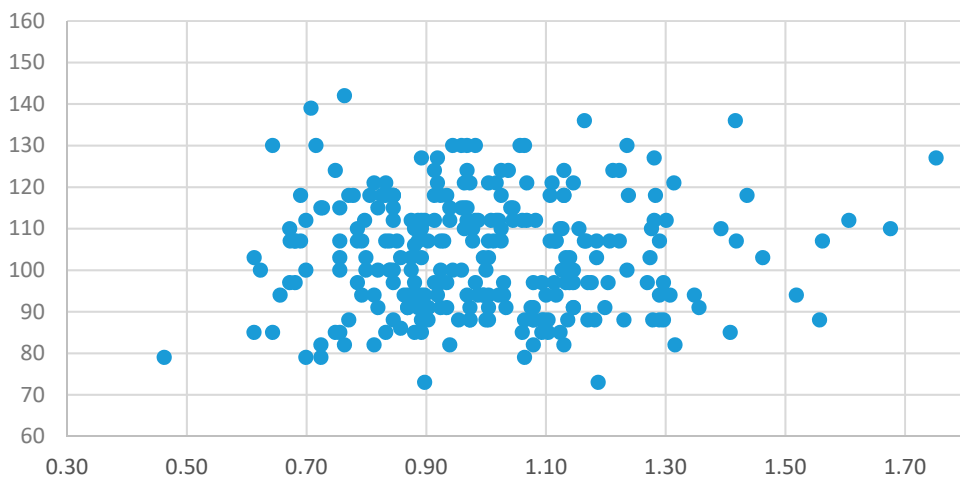
BSID3 cog1 (y) vs log10 PB cord blood (x)



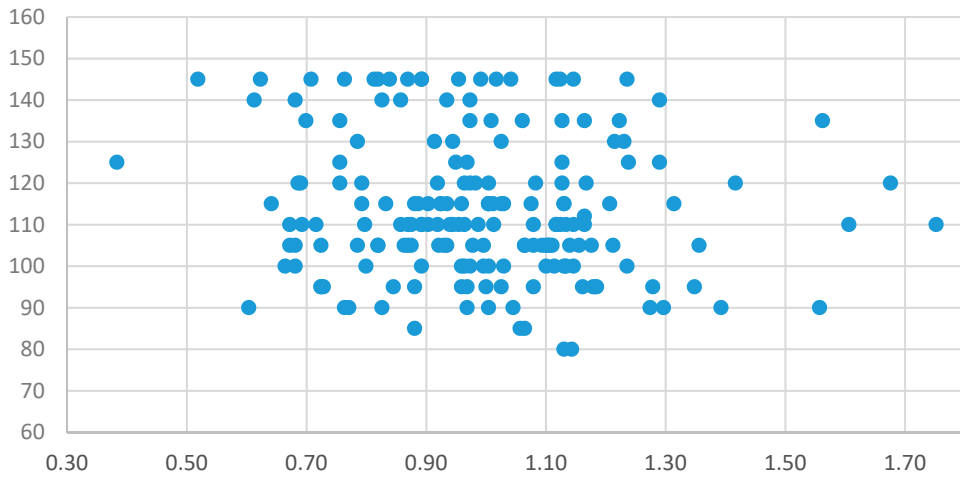
BSID3 lan1 (y) vs log10 PB cord blood (x)



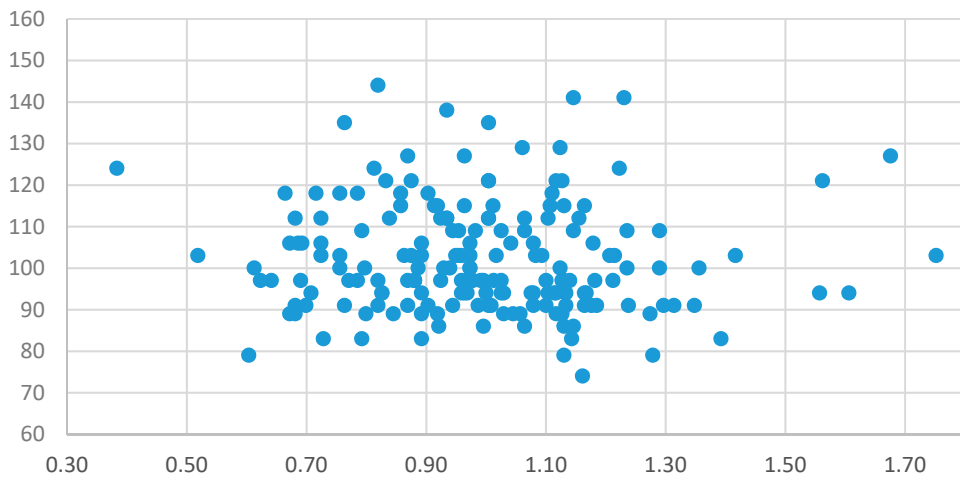
BSID3 mot1 (y) vs log10 PB cord blood (x)



BSID3 cog2 (y) vs log10 PB cord blood (x)



BSID3 lan2 (y) vs log10 PB cord blood (x)



BSID3 mot2 (y) vs log10 PB cord blood (x)

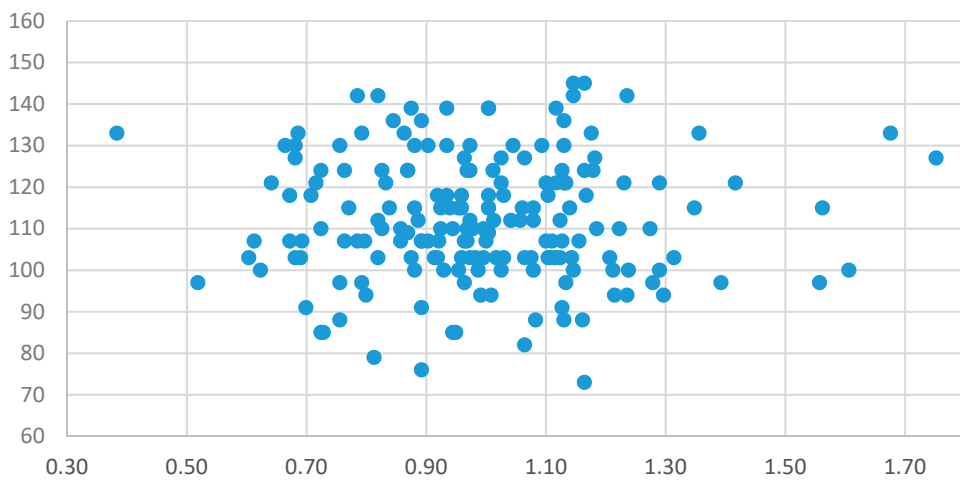
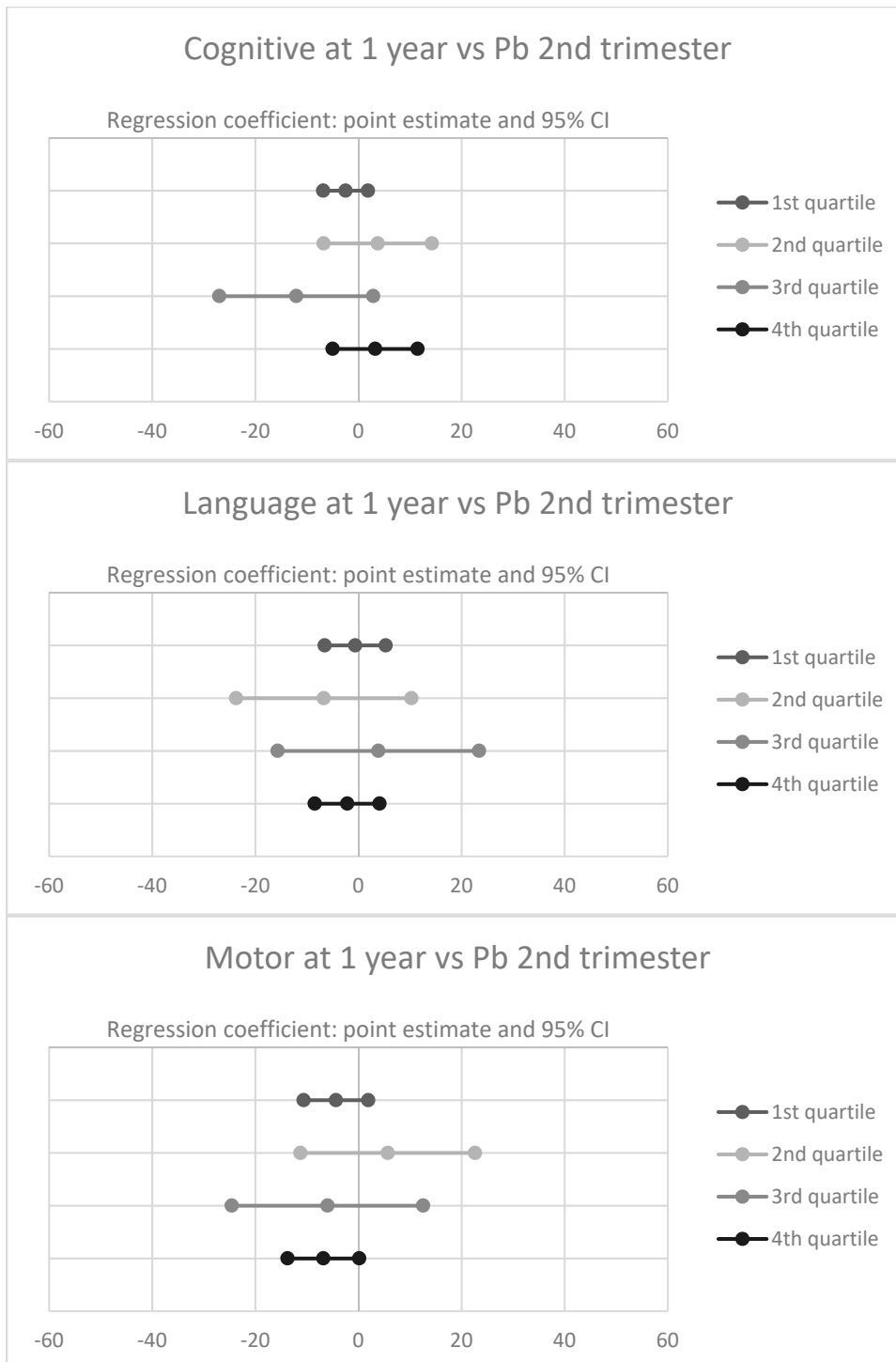
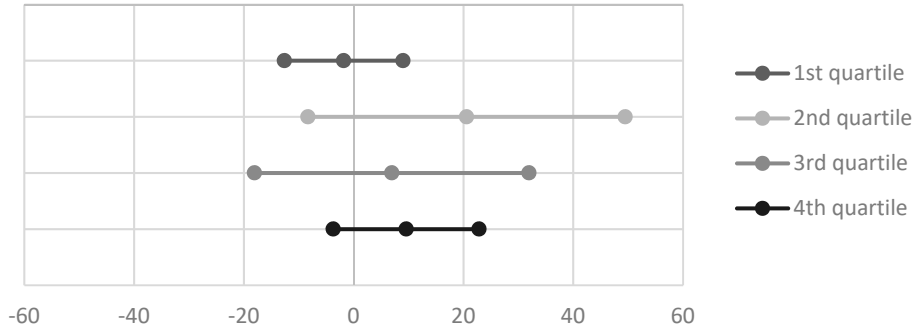


Figure S2. Point estimates and 95% confidence intervals of regression coefficients measuring the effect of blood lead level (log10-transformed and standardized) on Bayley scores in the subgroups of children based on quartiles of blood lead level.



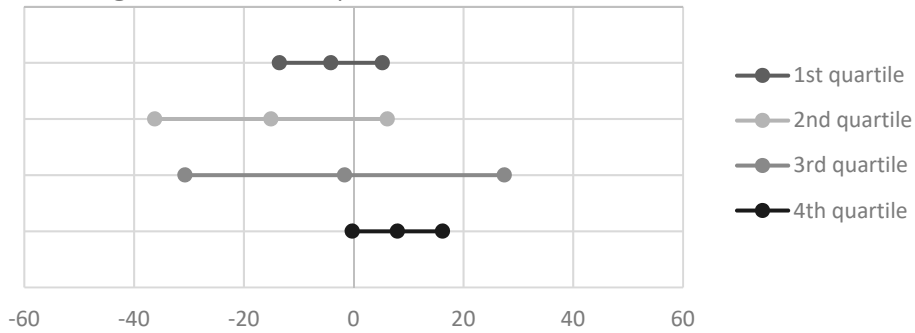
Cognitive at 2 years vs Pb 2nd trimester

Regression coefficient: point estimate and 95% CI



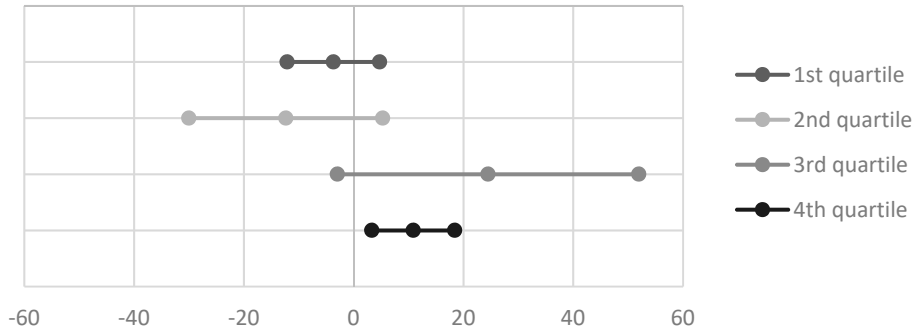
Language at 2 years vs Pb 2nd trimester

Regression coefficient: point estimate and 95% CI



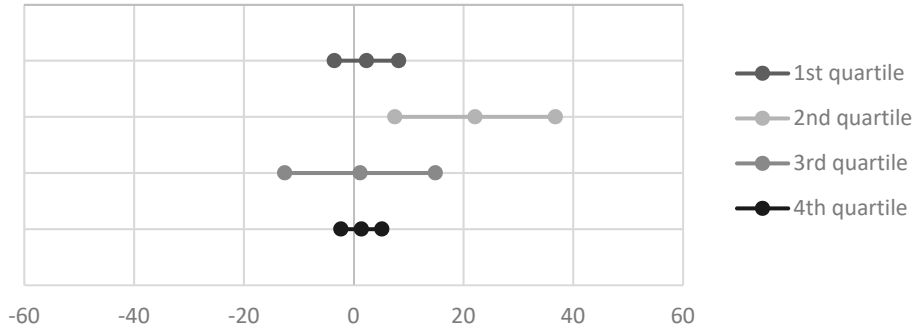
Motor at 2 years vs Pb 2nd trimester

Regression coefficient: point estimate and 95% CI



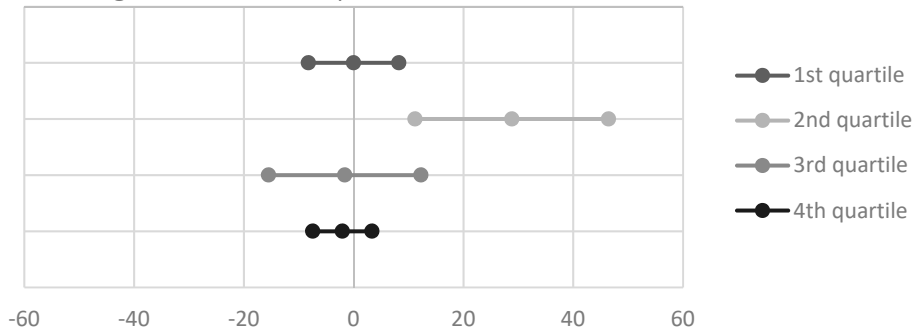
Cognitive at 1 year vs Pb cord blood

Regression coefficient: point estimate and 95% CI



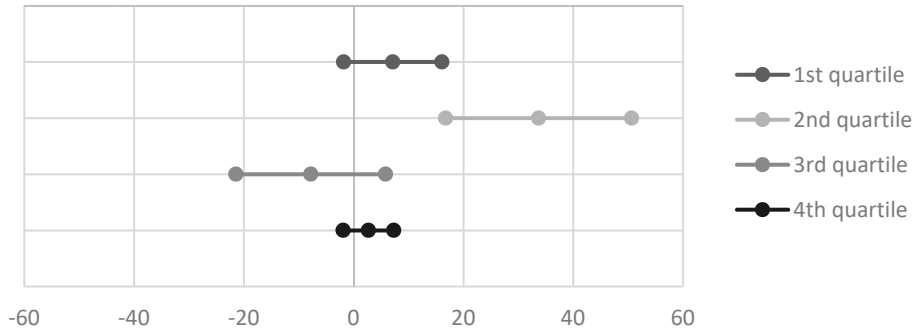
Language at 1 year vs Pb cord blood

Regression coefficient: point estimate and 95% CI



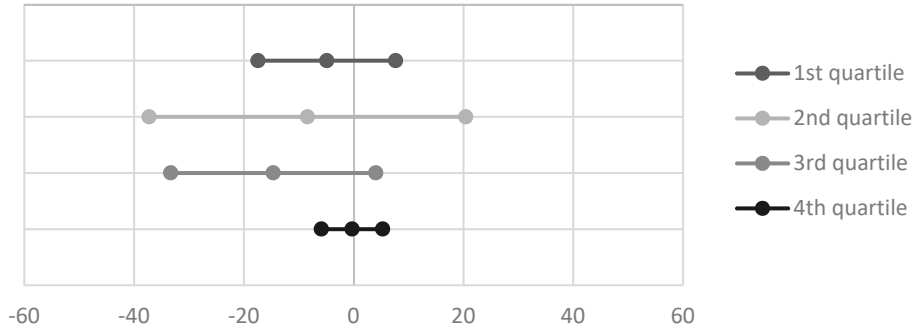
Motor at 1 year vs Pb cord blood

Regression coefficient: point estimate and 95% CI



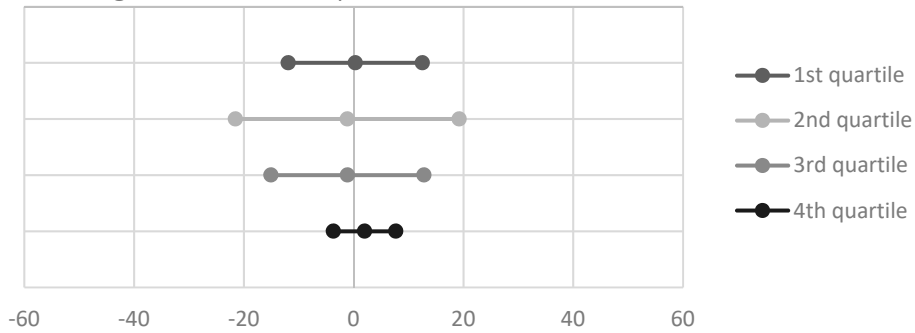
Cognitive at 2 years vs Pb cord blood

Regression coefficient: point estimate and 95% CI



Cognitive at 2 years vs Pb cord blood

Regression coefficient: point estimate and 95% CI



Cognitive at 2 years vs Pb cord blood

Regression coefficient: point estimate and 95% CI

