

Supplemental material

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Supplementary Table 1: CBCL internalising symptom model predictors using multiple imputation.

	B [95% CI]	p	f²
Maternal EPDS	0.22 [0.08, 0.36]	.003 **	0.03
Maternal BMI	-0.04 [-0.13, 0.06]	.436	-
Multiple pregnancy	0.58 [-1.10, 2.27]	.497	-
Parity			
1	-0.37 [-1.41, 0.67]	.487	-
2	-1.33 [-3.09, 0.42]	.136	-
3+	0.64 [-1.34, 2.62]	.524	-
IMD rank	-0.41 [-0.91, 0.10]	.115	-
Gestational age at birth (weeks)	0.22 [-0.00, 0.44]	.053	-
Birthweight (kg)	-0.97 [-1.90, -0.05]	.038 *	0.005
Sex: female	-0.51 [-1.35, 0.33]	.232	-
Corrected age at assessment (months)	0.02 [-0.41, 0.45]	.923	-
Cognition	-0.05 [-0.10, -0.01]	.016 *	0.01

p<0.05 *, p<0.01 **, p<0.001 ***

Adjusted R² = 0.0566.

B = unstandardised coefficient.

Outcome variable = Child Behaviour Checklist internalising sub-score at 18 months. Maternal EPDS = maternal Edinburgh Postnatal Depression Scale score at term-equivalent age. Multiple pregnancy = dummy variable of twin/triplet pregnancy. Parity = dummy variable, one/two/three+ previous child(ren). Corrected age at assessment (months) = age at behavioural assessment, corrected for gestational age. Cognition = infant Bayley III score at 18 months.

Effect size (Cohen's f², calculated from squared part correlations for predictors significant to 0.05): 0.02 = small, 0.15 = medium and 0.35 = large.¹

- indicates data not given, as predictor not significant to 0.05.

Supplementary Table 2: CBCL externalising symptom model predictors using multiple imputation.

	B [95% CI]	p	f²
Maternal EPDS	0.40 [0.20, 0.61]	<.001 ***	0.05
Maternal BMI	0.01 [-0.17, 0.15]	.933	-
Multiple pregnancy	2.51 [-0.29, 5.31]	.079	-
Parity			
1	-1.06 [-2.53, 0.42]	.160	-
2	-0.61 [-3.55, 2.33]	.682	-
3+	-0.96 [-4.47, 2.56]	.593	-
IMD rank	-0.24 [-1.11, 0.63]	.585	-
Gestational age at birth (weeks)	-0.07 [-0.40, 0.27]	.701	-
Birthweight (kg)	1.03 [-0.38, 2.44]	.153	-
Sex: female	-1.80 [-3.07, -0.53]	.006 **	0.06
Corrected age at assessment (months)	-0.40 [-0.95, 0.16]	.161	-
Cognition	0.03 [-0.03, 0.10]	.322	-

p<0.05 *, p<0.01 **, p<0.001 ***

Adjusted R² = 0.0612.

B = unstandardised coefficient.

Outcome variable = Child Behaviour Checklist externalising sub-score at 18 months. Maternal EPDS = maternal Edinburgh Postnatal Depression Scale score at term-equivalent age. Multiple pregnancy = dummy variable of twin/triplet pregnancy. Parity = dummy variable, one/two/three+ previous child(ren). Corrected age at assessment (months) = age at behavioural assessment, corrected for gestational age. Cognition = infant Bayley III score at 18 months.

Effect size (Cohen's f², calculated from squared part correlations for predictors significant to 0.05): 0.02 = small, 0.15 = medium and 0.35 = large.¹

- indicates data not given, as predictor not significant to 0.05.

Supplementary Table 3: CBCL and Q-CHAT model predictors using complete case analysis without interaction.

	CBCL		Q-CHAT	
	B [95% CI]	p	B [95% CI]	p
Maternal EPDS	0.88 [0.35, 1.41]	.001 **	0.21 [-0.02, 0.44]	.069
Maternal BMI	-0.01 [-0.38, 0.37]	.963	0.01 [-0.16, 0.17]	.930
Multiple pregnancy	1.50 [-6.87, 9.87]	.724	0.43 [-2.50, 3.37]	.772
Parity				
1	-2.83 [-6.60, 0.94]	.141	-1.54 [-3.41, 0.34]	.108
2	-3.49 [-10.3, 3.35]	.316	0.13 [-2.85, 3.10]	.933
3+	-1.38 [-10.0, 7.30]	.755	-1.43 [-4.50, 1.64]	.360
IMD rank	-1.44 [-3.56, 0.67]	.181	-1.75 [-2.70, -0.79]	<.001 ***
Gestational age at birth (weeks)	0.01 [-0.90, 0.91]	.987	0.10 [-0.33, 0.54]	.639
Birthweight (kg)	-0.65 [-4.38, 3.08]	.733	-1.81 [-3.63, 0.00]	.050
Sex: female	-4.57 [-7.82, -1.31]	.006 **	-2.12 [-3.60, -0.64]	.005 **
Corrected age at assessment (months)	-0.84 [-2.26, 0.59]	.247	-0.41 [-1.18, 0.35]	.290
Cognition	-0.03 [-0.20, 0.13]	.689	-0.23 [-0.30, -0.15]	<.001 ***

p<0.05 *; p<0.01 **; p<0.001 ***

CBCL adjusted R² = 0.0862. Q-CHAT adjusted R² = 0.2103.

B = unstandardised coefficient.

CBCL = Child Behaviour Checklist externalising sub-score at 18 months. Q-CHAT = Quantitative Checklist for Autism in Toddlers score at 18 months. Maternal EPDS = maternal Edinburgh Postnatal Depression Scale score at term-equivalent age. Multiple pregnancy = dummy variable of twin/triplet pregnancy. Parity = dummy variable, one/two/three+ previous child(ren). Gestation (weeks) = dummy variable: 34-36+6 weeks and ≥37 weeks gestation at birth. Corrected age at assessment (months) = age at behavioural assessment, corrected for gestational age. Cognition = infant Bayley III score at 18 months.

Supplementary Table 4: EPDS score predictors.

	IRR [95% CI]	p
Time-lag (weeks)	1.01 [0.97, 1.05]	.647
Gestation:term	0.91 [0.64, 1.31]	.627
IMD rank	1.00 [1.00, 1.00]	.103
Multiple pregnancy	0.66 [0.46, 0.96]	.031 *
Parity		
1	0.79 [0.66, 0.95]	.011 *
2	0.87 [0.60, 1.28]	.491
3+	0.84 [0.54, 1.31]	.445
Birthweight (kg)	0.98 [0.83, 1.17]	.847
Sex:female	1.13 [0.98, 1.31]	.098

p<0.05 *; p<0.01 **; p<0.001 ***

Pseudo R² = 0.0228

IRR = incidence rate ratio

Outcome variable = maternal Edinburgh Postnatal Depression Scale (EPDS) score at term-equivalent age. Time-lag (weeks) = time in weeks between birth and EPDS assessment. Gestation:term = dummy variable, term (≥37 weeks) vs preterm (<37 weeks) gestation at birth. Multiple pregnancy = dummy variable of twin/triplet pregnancy. Parity = dummy variable, one/two/three+ previous child(ren).

Supplementary Table 5: EPDS score predictors including interaction ‘term x time-lag’.

	IRR [95% CI]	p
Time-lag (weeks)	1.00 [0.97, 1.04]	.823
Gestation: term	0.88 [0.58, 1.34]	.553
IMD rank	1.00 [1.00, 1.00]	.104
Multiple pregnancy	0.66 [0.46, 0.96]	.029 *
Parity		
1	0.79 [0.66, 0.95]	.010 *
2	0.87 [0.60, 1.28]	.480
3+	0.85 [0.55, 1.31]	.458
Birthweight (kg)	0.97 [0.83, 1.15]	.756
Sex:female	1.13 [0.98, 1.30]	.100
Term x time-lag (weeks)	1.01 [0.94, 1.10]	.735

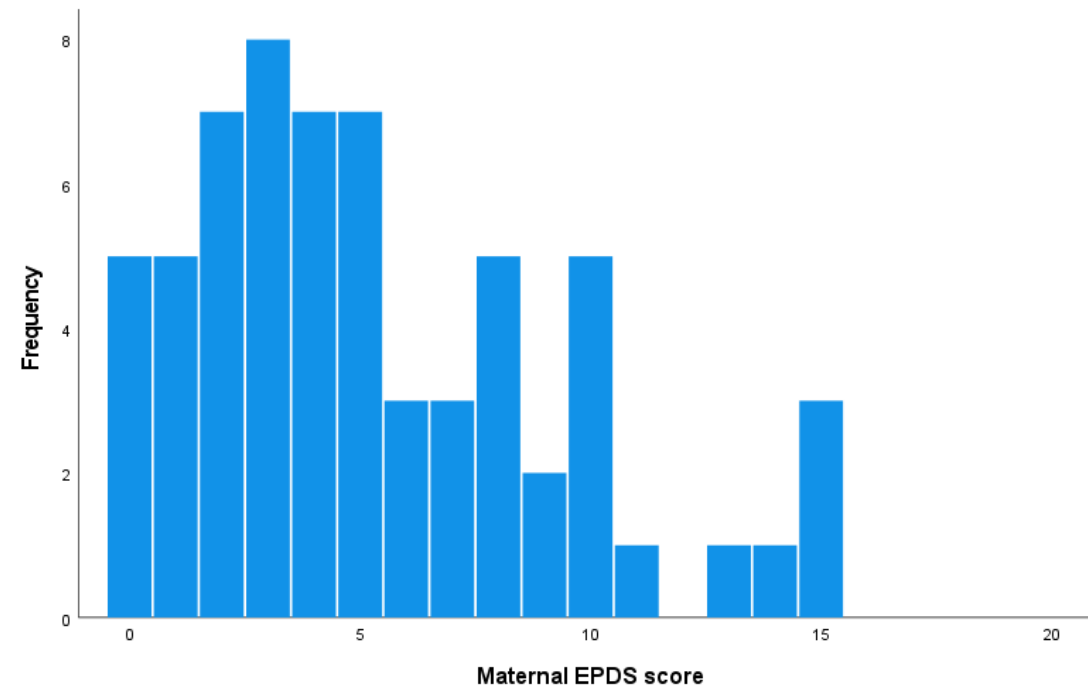
p<0.05 *; p<0.01 **; p<0.001 ***

Pseudo R² = 0.0230

IRR = incidence rate ratio

Outcome variable = maternal Edinburgh Postnatal Depression Scale (EPDS) score at term-equivalent age. Time-lag (weeks) = time in weeks between birth and EPDS assessment. Gestation: term = dummy variable, term (≥37 weeks) vs preterm (<37 weeks) gestation at birth. Multiple pregnancy = dummy variable of twin/triplet pregnancy. Parity = dummy variable, one/two/three+ previous child(ren). Term x time-lag (weeks): interaction term between term gestation at birth and time-lag between birth and maternal EPDS assessment.

Supplementary Figure 1: Histogram showing the distribution of maternal EPDS scores at term-equivalent age.



Supplemental reference list

1. Cohen J. *Statistical Power Analysis for the Behavioral Sciences*. 2nd ed. L. Erlbaum Associates; 1988.