Supplemental Material S4. Risk factor information and effect size data extracted from each study.

Study	Risk factor	Variables/specifications	Туре	Reference	Adjusted	OR	95% CI
Hammer et al. (2001)	Maternal education*	Years	Continuous		No	1.25	1.14-1.37
	Minority status	African American	Dichotomous	White	No	2.68	1.52-4.72
		Hispanic	Dichotomous	White	No	0.71	0.16-3.09
	Parenting behavior	Read to child 1-5x/week	Categorical	Everyday	No	1.68	1.19–2.35
		Read to child $\leq 1-3x/\text{month}$	Categorical	Everyday	No	2.72	1.43-5.18
		Tell stories to child 1–5x/week	Categorical	Everyday	No	1.02	0.68-1.53
		Tell stories to child $\leq 1-3x/month$	Categorical	Everyday	No	1.64	1.08-2.49
		Discuss daily activities 1–5x/week	Categorical	Everyday	No	0.95	0.65-1.39
		Discuss daily activities $\leq 1-3x/month$	Categorical	Everyday	No	4.31	2.42-7.68
		Routine wake time	Dichotomous	Everyday	No	1.43	0.96-2.14
		Family meal \leq 1–5 x/week	Dichotomous	Everyday	No	1.87	0.07-5.19
	Socioeconomic status*	Income-to-poverty	Continuous		No	1.49	1.27-1.75
		Per capita income	Continuous		No	1.00	1.00-1.00
		Neighborhood income-to-poverty	Continuous		No	4.00	1.85-8.33
Merricks et al. (2004)	Biological sex	Male	Dichotomous		No	1.02	0.42-2.49
Reilly et al. (2010)	Birth order	2nd	Categorical	1st	Yes	1.01	0.63–1.61
Receptive subgroup		3rd	Categorical	1st	Yes	1.88	1.04-3.37
		4th	Categorical	1st	Yes	1.30	0.36-4.75
	Birth weight*		Continuous		Yes	1.22	0.79–1.89
	Family history		Dichotomous		Yes	1.88	1.23-2.85
	Maternal age*		Continuous		Yes	1.03	0.98-1.09
	Maternal education*	13 years	Categorical	\leq 12 years	Yes	1.05	0.65–1.69
		Degree/postgraduate degree	Categorical	\leq 12 years	Yes	1.96	1.10-3.57
	Maternal mental health		Dichotomous		Yes	0.90	0.58-1.38
	Maternal vocabulary*		Continuous		Yes	1.09	1.03-1.14
	Multiple birth		Dichotomous		Yes	1.34	0.36-4.98
	Prematurity	< 36 weeks	Dichotomous	\geq 36 weeks	Yes	0.98	0.32-3.03
	Biological sex	Male	Dichotomous	Female	Yes	2.20	1.46-3.32

	Socioeconomic status*	SEIFA	Continuous		Yes	1.43	1.03–1.96
Reilly et al. (2010)	Birth order	2nd	Categorical	1st	Yes	1.29	0.75-2.21
Expressive subgroup		3rd	Categorical	1st	Yes	2.00	1.01-3.96
		4th	Categorical	1st	Yes	1.66	0.43-6.34
	Birth weight*		Continuous		Yes	1.61	0.98–2.70
	Family history		Dichotomous		Yes	1.69	1.05-2.73
	Maternal age*		Continuous		Yes	1.02	0.97-1.09
	Maternal education*	13 years	Categorical	<u><</u> 12 years	Yes	2.00	1.19–3.33
		Degree/postgraduate degree	Categorical	<u><</u> 12 years	Yes	3.85	1.96–7.14
	Maternal mental health		Dichotomous		Yes	0.77	0.46-1.29
	Maternal vocabulary*		Continuous		Yes	1.04	0.98-1.10
	Prematurity	< 36 weeks	Dichotomous		Yes	0.65	0.16-2.64
	Biological sex	Male	Dichotomous		Yes	1.43	0.90-2.28
	Socioeconomic status*	SEIFA	Continuous		Yes	1.54	1.09-2.22
Stanton-Chapman et al. (2002)	Birth order	3rd or 4th	Categorical	1st or 2nd	No	1.40	1.30–1.40
		5th or more	Categorical	1st or 2nd	No	1.70	1.60-1.90
	Birth weight	< 1500 g	Categorical	<u>></u> 2500g	No	2.80	2.40-3.40
		1500–2499 g	Categorical	≥ 2500g	No	1.60	1.40-1.70
	Congenital abnormality	Spina bifida, heart malformation, etc.	Dichotomous		No	1.40	1.10-1.70
	Maternal age	< 18 years	Dichotomous	18-35 years	No	1.60	1.50-1.80
	Maternal education	< 12 years	Categorical	> 12 years	No	2.10	1.90-2.20
		12 years	Categorical	> 12 years	No	1.40	1.00-1.50
	Multilingual exposure*	Spanish	Categorical	English	No	1.56	1.41 - 1.72
		Other	Categorical	English	No	1.59	1.28-1.96
	Newborn condition	5-min Apgar 0–3	Categorical	7–10	No	2.50	1.60-4.10
		5-min Apgar 4–6	Categorical	7–10	No	1.90	1.50-2.40
		Anemia, assisted ventilation, etc.	Dichotomous		No	1.40	1.10-1.70
	Parent marital status	Unmarried	Dichotomous	Married	No	1.80	1.70–1.80
	Perinatal event	Birth complications	Dichotomous		No	1.10	1.10-1.20
	Pregnancy condition	Anemia, diabetes, preeclampsia, etc.	Dichotomous		No	1.20	1.20-1.30
	Prematurity	< 37 weeks	Dichotomous	37–42 weeks	No	1.50	1.30-1.60

	Prenatal care	2nd trimester	Categorical	1st trimester	No	1.50	1.40-1.60
		3rd trimester/none	Categorical	1st trimester	No	1.80	1.70-2.00
	Prenatal exposure	Maternal tobacco use	Dichotomous		Yes	1.20	1.10-1.20
		Maternal alcohol use	Dichotomous		Yes	1.20	1.10-1.40
	Biological sex	Male	Dichotomous		No	1.64	1.56–1.73
Tomblin, Records, et al. (1997)	Biological sex	Male	Dichotomous		No	1.42	1.07–1.89
Tomblin, Smith, et al. (1997b)	Birth weight	≤ 2500g	Dichotomous		Yes	1.70	0.80–3.80
	Breastfed*		Dichotomous		Yes	2.00	1.43-2.50
	Family history	Maternal speech problem (SP)	Dichotomous		No	0.80	0.43-1.50
		Maternal mental retardation (MR)	Dichotomous		No	1.50	0.60-3.80
		Maternal learning disability (LD)	Dichotomous		No	1.60	0.87-2.00
		Maternal SP, MR, or LD	Dichotomous		No	1.30	0.81-2.00
		Paternal speech problem (SP)	Dichotomous		No	1.90	1.10-3.30
		Paternal mental retardation (MR)	Dichotomous		No	3.90	1.90-8.10
		Paternal learning disability (LD)	Dichotomous		No	1.80	1.00-3.30
		Paternal SP, MR, or LD	Dichotomous		No	2.10	1.30-3.10
	Maternal education	Incomplete high school	Categorical	College grad	No	3.50	1.80-6.50
		Complete high school	Categorical	College grad	No	2.30	1.60-3.90
		Incomplete college	Categorical	College grad	No	1.70	1.10-2.80
	Paternal education	Incomplete high school	Categorical	College grad	No	3.20	1.80-5.50
		Complete high school	Categorical	College grad	No	2.40	1.60-3.80
		Incomplete college	Categorical	College grad	No	1.80	1.10-3.00
	Maternal illness	Kidney infection	Dichotomous		No	0.60	0.20-1.60
		Thyroid issue	Dichotomous		No	1.40	0.40-5.20
		Sexually transmitted disease	Dichotomous		No	1.20	0.70-2.00
		Urinary tract infection	Dichotomous		No	1.20	0.70-2.00
	Perinatal event	Cesarean section	Dichotomous		Yes	0.70	0.50-1.10
		Forceps delivery	Dichotomous		Yes	0.50	0.30-1.00
		Labor duration < 2 hours	Categorical	2-12 hours	Yes	1.60	0.90-2.80
		Labor duration 12-24 hours	Categorical	2-12 hours	Yes	1.10	0.70-1.80

		Labor duration > 24 hours	Categorical	2–12 hours	Yes	1.10	0.50-2.40
		Induced labor	Dichotomous		Yes	1.00	0.60–1.50
		Birth complications	Dichotomous		Yes	0.80	0.60-1.20
	Pregnancy condition	History of poor pregnancy outcomes	Dichotomous		No	1.10	0.50-1.60
		Gestational diabetes	Dichotomous		No	1.00	0.50-2.20
		Hypertension	Dichotomous		No	1.10	0.70-1.80
	Prenatal exposure	Maternal smoking	Dichotomous		No	1.60	1.10-2.20
		Maternal illicit drug use	Dichotomous		No	0.80	0.40-1.50
		Maternal alcohol use	Dichotomous		No	1.00	0.70-1.40
		Paternal smoking	Dichotomous		No	1.90	1.40-2.60
		Paternal illicit drug use	Dichotomous		No	1.30	0.90-2.90
		Paternal alcohol use	Dichotomous		No	0.70	0.40-1.20
		Occupational exposure	Dichotomous		No	0.90	0.60-1.40
Tomblin et al. (1998)	Childhood exposure	Maternal smoking	Dichotomous		No	1.70	1.20-2.30
		Paternal smoking	Dichotomous		No	1.80	1.30-2.50
		One parent smoking	Categorical	No smoking	No	1.70	1.10-2.70
		Both parents smoking	Categorical	No smoking	No	2.30	1.50-3.40
	Maternal age*		Continuous		No	1.05	1.01-1.09
	Minority status	African American	Dichotomous		No	2.70	1.50-4.70
		Hispanic	Dichotomous		No	0.70	0.20-3.10
	Parent education*	Average years (mother, father)	Continuous		No	1.32	1.20-1.46
	Prenatal exposure	Maternal alcohol use	Dichotomous		No	0.90	0.60-1.30
		Maternal marijuana	Dichotomous		No	0.80	0.40-1.40
		Maternal cocaine	Dichotomous		No	1.00	0.30-2.90
		Maternal smoking, but quit	Categorical	No smoking	No	1.60	0.90-2.50
		Maternal smoking throughout	Categorical	No smoking	No	1.60	0.10-2.30
		Paternal smoking, but quit	Categorical	No smoking	No	1.00	0.40-3.10
		Paternal smoking throughout	Categorical	No smoking	No	1.90	1.40-2.70
	Socioeconomic status*	Income	Continuous		No	1.22	1.11–1.35
Whitehouse et al. (2014)	Birth weight	SGA	Dichotomous		No	1.52	0.65-3.55
	Maternal age	> 35 years	Dichotomous		No	1.13	0.34–3.79

Maternal education	< 12 years	Dichotomous	No	3.08	1.16-8.20
Maternal illness	Preexisting diabetes	Dichotomous	No	0.55	0.03–9.17
	Kidney infection	Dichotomous	No	1.66	0.39–7.14
Newborn condition	Time to spontaneous respiration	Dichotomous	No	1.64	0.71-3.81
	Resuscitation	Dichotomous	No	1.75	0.65-4.70
	Birth trauma	Dichotomous	No	0.97	0.23-4.12
	1-min Apgar < 7	Dichotomous	No	1.63	0.73-3.61
	5-min Apgar < 8	Dichotomous	No	2.17	0.81-5.82
	NICU placement	Dichotomous	No	2.20	0.95–5.11
	Poor sucking/feeding	Dichotomous	No	2.33	0.54-10.10
	Hypoglycemia	Dichotomous	No	0.47	0.06-3.52
	Jaundice	Dichotomous	No	1.29	0.58 - 2.85
	Anemia	Dichotomous	No	5.10	0.65-40.29
	Temperature maintenance	Dichotomous	No	2.52	0.15-43.45
Parent marital status	Separated	Dichotomous	No	0.64	0.15-2.71
Perinatal event	Breech	Dichotomous	No	0.98	0.13–7.36
	Induced labor	Dichotomous	No	1.07	0.47-2.41
	Maternal fever	Dichotomous	No	1.30	0.30–5.59
	Abnormal fetal heart rate	Dichotomous	No	1.02	0.44-2.35
	Prostaglandins	Dichotomous	No	0.73	0.10-5.47
	Oxytocin	Dichotomous	No	1.18	0.53-2.62
	Narcotic analgesia	Dichotomous	No	0.90	0.41 - 2.00
	Epidural analgesia	Dichotomous	No	1.08	0.50-2.35
	Atypical placenta	Dichotomous	No	1.38	0.41-4.64
	Atypical umbilical cord	Dichotomous	No	1.74	0.69–4.38
	Elective cesarean section	Dichotomous	No	1.28	0.38-4.32
	Emergency cesarean section	Dichotomous	No	0.87	0.20-3.70
	Forceps/vacuum delivery	Dichotomous	No	0.40	0.10-1.72
	Labor duration > 10 hours	Dichotomous	No	0.25	0.03-1.85
	Expulsion > 120 min	Dichotomous	No	0.97	0.29-3.30
Pregnancy condition	Maternal BMI > 30	Dichotomous	No	0.26	0.02-4.26

	Hyperemesis	Dichotomous	No	1.35	0.08-22.82
	Gestational diabetes	Dichotomous	No	0.97	0.06–16.17
	Threatened abortion	Dichotomous	No	2.19	0.65–7.43
	Hemorrhage	Dichotomous	No	1.10	0.26-4.69
	Preeclampsia	Dichotomous	No	1.13	0.07-19.03
	Hospital admission < 20 weeks	Dichotomous	No	1.22	0.16–9.18
	Hospital admission ≥ 20 weeks	Dichotomous	No	0.69	0.24-2.01
Prenatal exposure	Maternal alcohol use	Dichotomous	No	1.65	0.38–7.18
	Maternal smoking	Dichotomous	No	1.39	0.57-3.38
Biological sex	Male	Dichotomous	No	2.53	1.06-6.04
Socioeconomic status	Below poverty	Dichotomous	No	0.39	0.18-0.87

Note. OR = odds ratio; CI = confidence interval; SEIFA = Socio-Economic Indexes for Areas; SGA = small for gestational age; NICU = neonatal intensive care unit; BMI = body mass index.

*Factor was weighted protectively; inverse OR was calculated to get risk value.

^aTomblin, Records, et al. (1997) used a two phase diagnostic process: (1) screening followed by (2) thorough diagnostic assessment. The screening sample included children with a variety of developmental disorders, whereas the diagnostic sample focused on children with SLI; thus, the diagnostic sample was used to calculate the OR for sex. However, the ratio of males to females was not reported for the diagnostic sample. The male:female ratio for the diagnostic sample was assumed to be equivalent to the ratio for the full screening sample to perform this calculation.

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