

Supplemental Digital Content 9: Studies reporting effects of parental socioeconomic status included in the meta-analysis

Meta-Analysis												
First author	Year	Country	D	N	Age in years (SD) *	Age at CI in years (SD)	Gender % Female	Family variable	Measure Family variable	Language variable	Measure Language variable	Main Results
Cupples et al.	2016	AUS	C	49	n.a.	1.67 (1.09)	n.a.	Maternal Education	3 levels	Global expressive	CDI	Associated non sig. pos. with language outcomes
Geers et al.	2009	USA	C	153	5.1 (0.6)	2.4 (0.11)	n.a.	Parental Education	Highest parental education in years	Global expressive Global receptive Vocabulary size of expressive Vocabulary size of receptive	CELF expressive CELF receptive EOWPVT PPVT	Associated sig. pos. with expressive and receptive vocabulary and receptive and expressive language
Geers et al.	2011	USA	L	112	16.7 (0.6)	3.3	53	Parental income level	Parental income	Global expressive+receptive	Composite score PPVT CELF EOWPVT WISC VIQ	Associated sig. pos. with language outcomes
Guerzoni et al.	2016	ITA	C	28	2.16 (0.38)	1.11 (0.35)	46	Maternal Education	Years of education	Vocabulary size of expressive	MCDI Italian Version Words and Sentences	Associated non. sig. pos. with vocabulary
Huber & Kipman	2012	AUS	C	40	10.1 (1.3)	2.3 (1.2)	53	Family Education	Education Level Father and Mother (4 Levels)	Vocabulary size of expressive	HAWIK III - vocabulary subtest	Associated non. sig. pos with vocabulary expressive
Ketelaar et al.	2017	NLD	C	46	3.14 (1.18)	1.33 (0.56)	39	Maternal Education	4 levels	Global expressive	CDI	Associated non sig. neg. with global expressive
Moreno-Torres et al.	2016	ESP	L	14	n.a.	1.43 (0.18)	36	Parental Education	of the main carer 3 levels	Vocabulary size of expressive Lex 12	MacArthur parental questionnaire	Associated non. sig. pos. with vocabulary (12 months) and phonology (24

months) and associated sig. pos. with grammar (36 months)

Sarant & Garrard	2014	AUS	C	70	6.6 (1.4)	1.55 (0.8)	49	Parental Education	parent higher education 6 levels	Global expressive+receptive	PLS-4 Total language CELF-4 Core	Associated non-sig. neg. with global language
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Note. *Age for longitudinal = age at enrolment; age for cross-sectional = age at testing.; C=Cross-sectional; CDI=Communicative Development Inventories; CELF-4=Clinical Evaluation of Language Fundamentals Fourth Edition; CI=Cochlear Implant; D=Design; EOWPVT= Expressive One-Word Picture Vocabulary Test; HAWIK-III= Hamburg-Wechsler-Intelligenztest für Kinder Third Edition; IRSAD= Index of Relative Socio-economic Advantage and Disadvantage; L=Longitudinal; MCDI=MacArthur-Bates Communicative Development Inventories; MERVT= Mandarin Expressive and Receptive Vocabulary Test; PLS-4 EC=Preschool Language Scale Expressive Communication Fourth Edition; PPVT= Peabody Picture Vocabulary Test; SES=Socio-economic Status;