Supplemental material, Marschark et al., "Effects of Age at Cochlear Implantation on Learning and Cognition: A Critical Assessment," AJSLP, https://doi.org/10.1044/2019_AJSLP-18-0160

Supplemental Material S1. Effects of age at implantation on literacy and academic achievement with age as continuous variable: Information provided by authors for cochlear implant (CI) users and correlation coefficients, if provided, as estimates of effect size.

Authors	N	M (SD) age (yrs) at implant	M (SD) age (yrs) at test	M (SD) duration of use (yrs)	Assessment/task	$M(SD)^{a}$	Statistical analyses	Primary finding	r ^a
Geers (2003)	181	3.33 (0.83)	8–9	5.5 (0.75)	PIAT: Reading Recognition Reading Comprehension	2.5 (1.2) 2.8 (1.7)	Multiple regression	Neither age at implantation or duration of use associated with performance	NR
					WRMT Word Attack	2.6 (1.3)	Multiple regression	Neither age at implantation or duration of use associated with performance	NR
Geers (2004)	133	3.5 (0.75)	8.83 (0.6)	5.5 (0.8)	Weighted combination of PIAT, WRMT Word Attack	NR	Correlation	Earlier implantation not associated with performance	.04
Geers et al. (2008)	85	3.5 (0.80)	16.7 (0.06)	NR	PIAT	83.0	Correlation	Weighted high school scores significantly related to age at implantation but not duration of use	24, .01
	112	3.5	15–18.5	NR	PIAT	83.0 (17)	Multiple regression	Weighted combination of literacy scores significantly predicted by duration of profound deafness	NR
Geers & Hayes (2011)					TORC	90.0 (15)	Multiple regression		NR
					Writing: Spelling	67.0 (22)	Multiple regression		NR
					Writing: Essay	53.5 (16.8)	Multiple regression		NR
	82	4.8 (2.3)	11.9–24.6	11.7 (1.7)	Academic scores in Mathematics	12.31 (3.19)	Correlation	Neither age at implantation or duration of use associated with performance	08, .12
Uziel et al. (2007)					Academic scores in French	11.34 (2.37)	Correlation	Neither age at implantation or duration of use (respectively) associated with performance	09,03
					Academic scores in Foreign Language	12.40 (2.82)	Correlation	Neither age at implantation or duration of use (respectively) associated with performance	16,13
Archbold	77	4.17	NR	5	Edinburgh Reading Test	NR	Correlation	"Net reading age" associated with earlier implantation	80
et al. (2008)	105		11.08	7	Edinburgh Reading Test	NR	Correlation	"Net reading age" associated with earlier implantation	74

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Authors	N	M (SD) age (yrs) at implant	M (SD) age (yrs) at test	M (SD) duration of use (yrs)	Assessment/task	M (SD) ^a	Statistical analyses	Primary finding	r ^a
Ching et	62	NR	"soon after	NR	WJ-III DRB:	13.3 (15)	Multiple	Earlier implantation associated	NR
al. (2014)			turning 5 years of		Letter name knowledge Word Identification	103.4 (103.5), 115.5 (110.5)	regression	only with Word Identification	
			age"		Word Attack	113.3 (110.3)			
Sarant et al. (2015)	44	1.51 (0.72)	8.72 (0.24)	NR	WIAT-II: Mathematics Reading Writing	85.52 (16.72), 91.70 (17.25), 96.66 (16.48)	Correlation, Multiple regression	Earlier implantation associated only with higher reading scores; difference eliminated when other factors controlled	09 31 07

Note. NR = not reported; PIAT = Peabody Individual Achievement Test–Revised; WRMT = Woodcock Reading Mastery Test; TORC = Test of Reading Comprehension; WJ-III DRB = Woodcock-Johnson III Diagnostic Reading Battery; WIAT-II = Wechsler Individual Achievement Test–Second Edition.

aMultiple *Ms* (*SDs*) listed correspond to the order of assessments/tasks; multiple correlation coefficients listed correspond to the order of primary findings.

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