

Table S1. Comparison of Born in Bradford (BiB) Children with Non-Born in Bradford Children.

Characteristic	All children mean (SD) (range)	Non-BiB children mean (SD)	BiB children mean (SD)	Mean Difference (95% CI)
Letter ID score	105.64 (12.78) (68-143) n=6249	104.7 (12.98) n=3320	106.7 (12.46) n=2929	-1.99 (-2.62 to -1.36)
British Picture Vocabulary Score	99.03 (16.43) (39 to 161) n=6160	97.96 (17.55) n=3268	100.23 (14.97) n=2892	-2.28 (-3.09 to -1.46)
Visual Acuity (logMAR)	0.137 (0.09) (0 to 1.0) n= 12083	0.139 (0.09) n=7215	0.134 (0.09) n=4868	0.005 (0.002 to 0.008)
Mean Spherical Error (Dioptres)	1.05 (0.69) (-5.6 to +9.74) n=11483	1.04 (0.71) n=6871	1.06 (0.67) n=4612	0.02 (-0.046 to 0.005)

Table S2. Associations between Literacy (Letter Identification Score) and Visual Acuity, British Picture Vocabulary Scale (BPVS), Socio-economic and Demographic (child and maternal) factors n=1979 children n= 74 school

FACTOR	UNADJUSTED mean difference in literacy scores (95% CI)	ADJUSTED BPVS mean difference in literacy scores (95% CI)	ADJUSTED DEMOGRAPHIC mean difference in literacy scores (95% CI) *	ADJUSTED SOCIOECONOMIC mean difference in literacy scores (95% CI) **	FULLY ADJUSTED MODEL mean difference in literacy scores (95% CI) ***
change in literacy score per 1 line (0.1log unit) of Visual Acuity	-2.41 (-2.97 to -1.85) p<0.001	-1.83 (-2.37 to -1.29) p<0.001	-1.76 (-2.29 to -1.23) p<0.001	-1.76 (-2.29 to -1.23) p<0.001	-1.69 (-2.21 to -1.16) p<0.001
change in literacy score per 1 unit change in BPVS		0.26 (0.23 to 0.30) p<0.001	0.26 (0.22 to 0.30) p<0.001	0.25 (0.21 to 0.29) p<0.001	0.24 (0.21 to 0.28) p<0.001
Ethnicity					
White British			reference		reference
Pakistani			1.08 (-0.56 to 2.72) p=0.196		0.10 (-1.6 to 1.8) p= 0.91
Other			3.78 (1.84 to 5.73) p<0.001		2.86 (0.88 to 4.84) p=0.005
Sex at birth					
Male			reference		reference
Female			2.8 (1.82 to 3.79) p<0.001		2.86 (1.88 to 3.84) p<0.001
Birth weight (g)			0.001 (0.0003 to 0.003) p=0.015		0.001 (0.0002 to 0.002) p=0.021
Gestational age (weeks)			0.046 (-0.32 to 0.41) p=0.806		0.027 (-0.33 to 0.39) p=0.883
Questionnaire Language					
English			1.94 (0.35 to 3.52) p=0.016		1.8 (0.22 to 3.4) p=0.026
Other language			reference		reference
UK born					
Yes			1.33 (-0.15 to 2.81) p=0.077		1.12 (-0.35 to 2.59) p=0.14
No			reference		reference
Receiving Benefits					
Yes				-0.98 (-2.0 to 0.05) p=0.062	-0.96 (-1.97 to 0.05) p=0.063
No				reference	reference
Level of Education					
Low (<5 GCSE equivalent & unknown)				reference	reference
Medium (5 GCSE & A level equivalent)				0.99 (-0.19 to 2.16) p=0.099	0.96 (-0.22 to 2.15) p=0.11
High (higher than A-level)				3.00 (1.49 to 4.50) p<0.001	2.91 (1.4 to 4.41) p<0.001
Smoked in pregnancy					
Yes				-2.38 (-3.87 to -0.88) p=0.002	-1.94 (-3.5 to -0.36) p=0.016
No				reference	reference

*Demographic adjustment includes; Visual Acuity, BPVS, ethnicity, sex at birth, birth weight, gestational age, language of baseline questionnaire, mothers place of birth.

**Socioeconomic adjustment includes; Visual Acuity, BPVS, receipt of benefits, level of mothers' education, mother smoked during pregnancy.

***Fully adjusted analysis includes all factors Visual Acuity, BPVS, ethnicity, sex at birth, birth weight, gestational age, language of baseline questionnaire, mothers place of birth, receipt of benefits, level of mothers education ,mother smoked during pregnancy.